SEQUENCE LISTING

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Zhao, Qing

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<120> METHODS AND MATERIALS RELATING TO NOVEL SECRETED ADIPONECTIN-LIKE POLYPEPTIDES AND POLYNUCLEOTIDES

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<140> Not Yet Assigned

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<150> US 09/488,725

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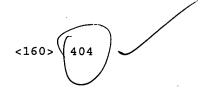
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aattaggtca tgtgacaatt aagtcttaat cactctttct tagacaaaca cttgaaggat     300

ctactgtcta aattgctgaa ctcaggctat tttgaaagta tcccagttcc caaaaatgcc     360

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tacaatcaga gaaaaaaaca caattatcga agactgaatc tgtcaaagag tcagagtctc   420

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aacaggattc aaaacagcca gagactccaa atcctgggga aacaatgtt gagagtcaaa  1020

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4

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cagccgcccc gggtacgcag aagccgcttc tgcaaggccc cggggaggc tgacctgcgg      240

aaaacgcacc gaccgcggcc ctcgggagcc ccgccccgcc ccggggatgc caagccgccc      300

ctccacctcg cagcggcgcc ggccgcccag acctgcccac cctcgccggg ccgcgccccg      360

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6

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tctgaacagg gcttccagtc acctccagca agtagtagtt cagtaaccat taacacagca    2340

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ttgcagaact tgacacagga gcacgtacaa aaagacttca agggggtttt gaatggtgca    240

gtgtatttgc cttcaaaaga acttgactac ctcattaagt tttcaaaact gacctgccct    300

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aaggaaaagg aagtaccact ggaggaagaa atg cta ata caa tca gag aaa aaa      534
                                   Met Leu Ile Gln Ser Glu Lys Lys
                                   1               5

aca caa tta tcg aag act gaa tct gtc aaa gag tca gag tct cta atg      582
Thr Gln Leu Ser Lys Thr Glu Ser Val Lys Glu Ser Glu Ser Leu Met
    10              15                  20

gaa ttt gcc cag cca gag ata caa cca caa gag ttt ctt aac aga cgc      630
Glu Phe Ala Gln Pro Glu Ile Gln Pro Gln Glu Phe Leu Asn Arg Arg
25                  30                  35                  40

tat atg aca gaa gta gat tat tca aac aaa caa ggc gaa gag caa cct      678
Tyr Met Thr Glu Val Asp Tyr Ser Asn Lys Gln Gly Glu Glu Gln Pro
                45                  50                  55

tgg gaa gca gat tat gct aga aaa cca aat ctc cca aaa cgt tgg gat      726
Trp Glu Ala Asp Tyr Ala Arg Lys Pro Asn Leu Pro Lys Arg Trp Asp
                60                  65                  70

atg ctt act gaa cca gat ggt caa gag aag aaa cag gag tcc ttt aag      774
Met Leu Thr Glu Pro Asp Gly Gln Glu Lys Lys Gln Glu Ser Phe Lys
        75                  80                  85

tcc tgg gag gct tct ggt aag cac cag gag gta tcc aag cct gca gtt      822
Ser Trp Glu Ala Ser Gly Lys His Gln Glu Val Ser Lys Pro Ala Val
    90                  95                  100

tcc tta gaa cag agg aaa caa gac acc tca aaa ctc agg tct act ctg      870
Ser Leu Glu Gln Arg Lys Gln Asp Thr Ser Lys Leu Arg Ser Thr Leu
105                 110                 115                 120

ccg gaa gag cag aag aag cag gag atc tcc aaa tcc aag cca tct cct      918
Pro Glu Glu Gln Lys Lys Gln Glu Ile Ser Lys Ser Lys Pro Ser Pro
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agc cag tgg aag caa gat aca cct aaa tcc aaa gca ggg tat gtt caa      966
Ser Gln Trp Lys Gln Asp Thr Pro Lys Ser Lys Ala Gly Tyr Val Gln
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gag gaa caa aag aaa cag gag aca cca aag ctg tgg cca gtt cag ctg     1014
Glu Glu Gln Lys Lys Gln Glu Thr Pro Lys Leu Trp Pro Val Gln Leu
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cag aaa gaa caa gat cca aag aag caa act cca aag tct tgg aca cct     1062
Gln Lys Glu Gln Asp Pro Lys Lys Gln Thr Pro Lys Ser Trp Thr Pro
        170                 175                 180

tcc atg cag agc gaa cag aac acc acc aag tca tgg acc act ccc atg     1110
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8

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tct cca aag tcc tgg gga gta gct aca gca agc ctc ata cca aat gac      1254
Ser Pro Lys Ser Trp Gly Val Ala Thr Ala Ser Leu Ile Pro Asn Asp
                235                 240                 245

cag ctg ctg ccc agg aag ttg aac aca gaa ccc aaa gat gtg cct aag      1302
Gln Leu Leu Pro Arg Lys Leu Asn Thr Glu Pro Lys Asp Val Pro Lys
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cct gtg cat cag cct gta ggt tct tcc tct acc ctt ccg aag gat cca      1350
Pro Val His Gln Pro Val Gly Ser Ser Ser Thr Leu Pro Lys Asp Pro
265                 270                 275                 280

gta ttg agg aaa gaa aaa ctg cag gat ctg atg act cag att caa gga      1398
Val Leu Arg Lys Glu Lys Leu Gln Asp Leu Met Thr Gln Ile Gln Gly
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act tgt aac ttt atg caa gag tct gtt ctt gac ttt gac aaa cct tca      1446
Thr Cys Asn Phe Met Gln Glu Ser Val Leu Asp Phe Asp Lys Pro Ser
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agt gca att cca acg tca caa ccg cct tca gct act cca ggt agc ccc      1494
Ser Ala Ile Pro Thr Ser Gln Pro Pro Ser Ala Thr Pro Gly Ser Pro
                315                 320                 325

gta gca tct aaa gaa caa aat ctg tcc agt caa agt gat ttt ctt caa      1542
Val Ala Ser Lys Glu Gln Asn Leu Ser Ser Gln Ser Asp Phe Leu Gln
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gag ccg tta cag gct act tct tct cca gtt act tgt agc tca aat gct      1590
Glu Pro Leu Gln Ala Thr Ser Ser Pro Val Thr Cys Ser Ser Asn Ala
345                 350                 355                 360

tgc ttg gtt act acc gat cag gct tct tct gga tct gaa aca gag ttt      1638
Cys Leu Val Thr Thr Asp Gln Ala Ser Ser Gly Ser Glu Thr Glu Phe
                365                 370                 375

atg acc tca gag act cct gag gca gca att ccc cca ggc aag caa ccg      1686
Met Thr Ser Glu Thr Pro Glu Ala Ala Ile Pro Pro Gly Lys Gln Pro
                380                 385                 390

tct tca cta gct tct cca aat cct ccc atg gca aag ggc tct gaa cag      1734
Ser Ser Leu Ala Ser Pro Asn Pro Pro Met Ala Lys Gly Ser Glu Gln
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ggc ttc cag tca cct cca gca agt agt agt tca gta acc att aac aca      1782
Gly Phe Gln Ser Pro Pro Ala Ser Ser Ser Ser Val Thr Ile Asn Thr
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9

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Ala Pro Phe Gln Ala Met Gln Thr Val Phe Asn Val Asn Ala Pro Leu
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cct cca cga aaa gaa caa gaa ata aaa gaa tcc cct tat tca cct ggc      1878
Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro Tyr Ser Pro Gly
                445                 450                 455


tac aat caa agt ttt acc aca gca agt aca caa aca cca ccc cag tgc      1926
Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr Pro Pro Gln Cys
                460                 465                 470


caa ctg cca tct ata cat gta gaa caa act gtc cat tct caa gag act      1974
Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His Ser Gln Glu Thr
                475                 480                 485


gca aat tat cat cct gat gga act att caa gta agc aat ggt agc ctt      2022
Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val Ser Asn Gly Ser Leu
            490                 495                 500


gcc ttt tac cca gca cag acg aat gtg ttt ccc aga cct act cag cca      2070
Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro Arg Pro Thr Gln Pro
505                 510                 515                 520


ttt gtc aat agc cgg gga tct gtt aga gga tgt act cgt ggt ggg aga      2118
Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys Thr Arg Gly Gly Arg
                525                 530                 535


tta ata acc aat tcc tat cgg tcc cct ggt ggt tat aaa ggt ttt gat      2166
Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly Tyr Lys Gly Phe Asp
                540                 545                 550


act tat aga gga ctc cct tca att tcc aat gga aat tat agc cag ctg      2214
Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly Asn Tyr Ser Gln Leu
            555                 560                 565


cag ttc caa gct aga gag tat tct gga gca cct tat tcc caa agg tgt      2262
Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro Tyr Ser Gln Arg Cys
    570                 575                 580


ttg gaa aca tct gag cct ctt tgg ttg ctg ggg aag gcc agg ata att      2310
Leu Glu Thr Ser Glu Pro Leu Trp Leu Leu Gly Lys Ala Arg Ile Ile
585                 590                 595                 600


tcc agc agt gtt ata agc gag gag gga cat ctg gtg gtc cac gag caa      2358
Ser Ser Ser Val Ile Ser Glu Glu Gly His Leu Val Val His Glu Gln
                605                 610                 615


att cga gag gtg agc agc cca gaa aga gac aac gaa acc ttt aac agt      2406
Ile Arg Glu Val Ser Ser Pro Glu Arg Asp Asn Glu Thr Phe Asn Ser
            620                 625                 630


ggt gac tct gga caa gga gac tcc cgt agc atg acc cct gtg gat gtg      2454
Gly Asp Ser Gly Gln Gly Asp Ser Arg Ser Met Thr Pro Val Asp Val
            635                 640                 645


cca gtg aca aat cca gca gcc acc ata ctg cca gta cac gtc tac cct      2502
Pro Val Thr Asn Pro Ala Ala Thr Ile Leu Pro Val His Val Tyr Pro
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10

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665                      670                  675                  680

ctg gcc cct gga act tta gac caa cct att gtg ttt gat ctt ctt ctg          2598
Leu Ala Pro Gly Thr Leu Asp Gln Pro Ile Val Phe Asp Leu Leu Leu
                    685                  690                  695

aac aac tta gga gaa act ttt gat ctt cag ctt ggt aga ttt aat tgc          2646
Asn Asn Leu Gly Glu Thr Phe Asp Leu Gln Leu Gly Arg Phe Asn Cys
                700                  705                  710

cca gtg aat ggc act tac gtt ttc att ttt cac atg cta aag ctg gca          2694
Pro Val Asn Gly Thr Tyr Val Phe Ile Phe His Met Leu Lys Leu Ala
                715                  720                  725

gtg aat gtg cca ctg tat gtc aac ctc atg aag aat gaa gag gtc ttg          2742
Val Asn Val Pro Leu Tyr Val Asn Leu Met Lys Asn Glu Glu Val Leu
        730                  735                  740

gta tca gcc tat gcc aat gat ggt gct cca gac cat gaa act gct agc          2790
Val Ser Ala Tyr Ala Asn Asp Gly Ala Pro Asp His Glu Thr Ala Ser
745                  750                  755                  760

aat cat gca att ctt cag ctc ttc cag gga gac cag ata tgg tta cgt          2838
Asn His Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln Ile Trp Leu Arg
                765                  770                  775

ctg cac agg gga gca att tat gga agt agc tgg aaa tat tct acg ttt          2886
Leu His Arg Gly Ala Ile Tyr Gly Ser Ser Trp Lys Tyr Ser Thr Phe
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11

Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr Glu Val Asp Tyr Ser
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Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys
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Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr Glu Pro Asp Gly Gln
65   70   75   80

Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu Ala Ser Gly Lys His
               85   90   95

Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp
          100   105   110

Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu
          115   120   125

Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro
         130   135   140

Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu Gln Lys Lys Gln Glu Thr
145   150   155   160

Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys
             165   170   175

Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr
          180   185   190

Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln
          195   200   205

Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His
     210   215   220

Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala
225   230   235   240

Thr Ala Ser Leu Ile Pro Asn Asp Gln Leu Leu Pro Arg Lys Leu Asn
          245   250   255

12

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Thr Glu Pro Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser
        260             265             270

Ser Ser Thr Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln
        275             280             285

Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser
    290             295             300

Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro
305             310             315             320

Pro Ser Ala Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu
            325             330             335

Ser Ser Gln Ser Asp Phe Leu Gln Glu Pro Leu Gln Ala Thr Ser Ser
        340             345             350

Pro Val Thr Cys Ser Ser Asn Ala Cys Leu Val Thr Thr Asp Gln Ala
        355             360             365

Ser Ser Gly Ser Glu Thr Glu Phe Met Thr Ser Glu Thr Pro Glu Ala
        370             375             380

Ala Ile Pro Pro Gly Lys Gln Pro Ser Ser Leu Ala Ser Pro Asn Pro
385             390             395             400

Pro Met Ala Lys Gly Ser Glu Gln Gly Phe Gln Ser Pro Pro Ala Ser
            405             410             415

Ser Ser Ser Val Thr Ile Asn Thr Ala Pro Phe Gln Ala Met Gln Thr
        420             425             430

Val Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile
    435             440             445

Lys Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala
    450             455             460

Ser Thr Gln Thr Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu
465             470             475             480
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Gln Thr Val His Ser Gln Glu Thr Ala Asn Tyr His Pro Asp Gly Thr
            485   490   495

Ile Gln Val Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn
            500   505   510

Val Phe Pro Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val
        515   520   525

Arg Gly Cys Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser
    530   535   540

Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile
545   550   555   560

Ser Asn Gly Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser
            565   570   575

Gly Ala Pro Tyr Ser Gln Arg Cys Leu Glu Thr Ser Glu Pro Leu Trp
            580   585   590

Leu Leu Gly Lys Ala Arg Ile Ile Ser Ser Ser Val Ile Ser Glu Glu
        595   600   605

Gly His Leu Val Val His Glu Gln Ile Arg Glu Val Ser Ser Pro Glu
    610   615   620

Arg Asp Asn Glu Thr Phe Asn Ser Gly Asp Ser Gly Gln Gly Asp Ser
625   630   635   640

Arg Ser Met Thr Pro Val Asp Val Pro Val Thr Asn Pro Ala Ala Thr
            645   650   655

Ile Leu Pro Val His Val Tyr Pro Leu Pro Gln Gln Met Arg Val Ala
            660   665   670

Phe Ser Ala Ala Arg Thr Ser Asn Leu Ala Pro Gly Thr Leu Asp Gln
    675   680   685

Pro Ile Val Phe Asp Leu Leu Leu Asn Asn Leu Gly Glu Thr Phe Asp
    690   695   700

Leu Gln Leu Gly Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe

14

Ile Phe His Met Leu Lys Leu Ala Val Asn Val Pro Leu Tyr Val Asn
                725   730   735

Leu Met Lys Asn Glu Glu Val Leu Val Ser Ala Tyr Ala Asn Asp Gly
            740   745   750

Ala Pro Asp His Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe
            755   760   765

Gln Gly Asp Gln Ile Trp Leu Arg Leu His Arg Gly Ala Ile Tyr Gly
        770   775   780

Ser Ser Trp Lys Tyr Ser Thr Phe Ser Gly Tyr Leu Leu Tyr Gln Asp
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<212>   DNA

<213>   Homo sapiens

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tatatgacag aagtagatta ttcaaacaaa caaggcgaag agcaaccttg ggaagcagat   180

tatgctagaa aaccaaatct cccaaaacgt tgggatatgc ttactgaacc agatggtcaa   240

gagaagaaac aggagtcctt taagtcctgg gaggcttctg gtaagcacca ggaggtatcc   300

aagcctgcag tttccttaga acagaggaaa caagacacct caaaactcag gtctactctg   360

ccggaagagc agaagaagca ggagatctcc aaatccaagc catctcctag ccagtggaag   420

caagatacac taaatccaa agcagggtat gttcaagagg aacaaaagaa acaggagaca   480

ccaaagctgt ggccagttca gctgcagaaa gaacaagatc caaagaagca aactccaaag   540

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atgcaagagt ctgttcttga ctttgacaaa ccttcaagtg caattccaac gtcacaaccg      960

ccttcagcta ctccaggtag ccccgtagca tctaaagaac aaaatctgtc cagtcaaagt     1020

gattttcttc aagagccgtt acaggctact tcttctccag ttacttgtag ctcaaatgct     1080

tgcttggtta ctaccgatca ggcttcttct ggatctgaaa cagagtttat gacctcagag     1140

actcctgagg cagcaattcc cccaggcaag caaccgtctt cactagcttc tccaaatcct     1200

cccatggcaa agggctctga acagggcttc cagtcacctc cagcaagtag tagttcagta     1260

accattaaca cagcaccctt tcaagccatg cagacagtat ttaacgttaa tgcacctctg     1320

cctccacgaa aagaacaaga aataaaagaa tcccttatt cacctggcta caatcaaagt      1380

tttaccacag caagtacaca aacaccaccc cagtgccaac tgccatctat acatgtagaa     1440

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aatggtagcc ttgcctttta cccagcacag acgaatgtgt ttcccagacc tactcagcca     1560

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cacgtctacc ctctgcctca gcagatgcga gttgccttct cagcagccag aacctctaat     2040

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atttttcaca tgctaaagct ggcagtgaat gtgccactgt atgtcaacct catgaagaat     2220

gaagaggtct tggtatcagc ctatgccaat gatggtgctc cagaccatga aactgctagc     2280

aatcatgcaa ttcttcagct cttccaggga gaccagatat ggttacgtct gcacagggga     2340

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<212> PRT

<213> Homo sapiens

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Leu Gln Leu Gly Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe
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Ile Phe His Met
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<210> 8

<211> 22

<212> PRT

<213> Homo sapiens

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Ile Trp Leu Arg Leu His
            20

<210> 9

<211> 20

<212> PRT

<213> Homo sapiens

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Ile Trp Leu Arg
            20



<210>  10

<211>  11

<212>  PRT

<213>  Homo sapiens



<400>  10

Lys Tyr Ser Thr Phe Ser Gly Tyr Leu Leu Tyr
1               5                   10


<210>  11

<211>  10

<212>  PRT

<213>  Homo sapiens



<400>  11

Ser Thr Phe Ser Gly Tyr Leu Leu Tyr Gln
1               5                   10


<210>  12

<211>  20

<212>  PRT

<213>  Homo sapiens



<400>  12

Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe Ile Phe His Met Leu
1               5                   10                  15
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Lys Leu Ala Val
        20

<210> 13

<211> 27

<212> PRT

<213> Homo sapiens

<400> 13

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1   5   10   15

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            20   25

<210> 14

<211> 2643

<212> DNA

<213> Homo sapiens

<220>

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atgctaaaac ttgaggctga gaagaaaaag cttcgaacta tacttcaagt tcagtatgta   180

ttgcagaact tgacacagga gcacgtacaa aaagacttca aggggggttt gaatggtgca   240
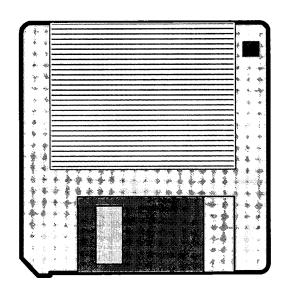
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gaaagaaatg aaagtctgag tgttgaagac cagatggagc agtcatcctt gtacttttgg   360

19

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THESE PAPERS

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aaggaaaagg aagtaccact ggaggaagaa atg cta ata caa tca gag aaa aaa       534
                                   Met Leu Ile Gln Ser Glu Lys Lys
                                   1                   5

aca caa tta tcg aag act gaa tct gtc aaa gag tca gag tct cta atg        582
Thr Gln Leu Ser Lys Thr Glu Ser Val Lys Glu Ser Glu Ser Leu Met
        10                  15                  20

gaa ttt gcc cag cca gag ata caa cca caa gag ttt ctt aac aga cgc        630
Glu Phe Ala Gln Pro Glu Ile Gln Pro Gln Glu Phe Leu Asn Arg Arg
25                  30                  35                  40

tat atg aca gaa gta gat tat tca aac aaa caa ggc gaa gag caa cct        678
Tyr Met Thr Glu Val Asp Tyr Ser Asn Lys Gln Gly Glu Glu Gln Pro
                45                  50                  55

tgg gaa gca gat tat gct aga aaa cca aat ctc cca aaa cgt tgg gat        726
Trp Glu Ala Asp Tyr Ala Arg Lys Pro Asn Leu Pro Lys Arg Trp Asp
                60                  65                  70

atg ctt act gaa cca gat ggt caa gag aag aaa cag gag tcc ttt aag        774
Met Leu Thr Glu Pro Asp Gly Gln Glu Lys Lys Gln Glu Ser Phe Lys
            75                  80                  85

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Ser Trp Glu Ala Ser Gly Lys His Gln Glu Val Ser Lys Pro Ala Val
        90                  95                  100

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Ser Leu Glu Gln Arg Lys Gln Asp Thr Ser Lys Leu Arg Ser Thr Leu
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ccg gaa gag cag aag aag cag gag atc tcc aaa tcc aag cca tct cct        918
Pro Glu Glu Gln Lys Lys Gln Glu Ile Ser Lys Ser Lys Pro Ser Pro
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agc cag tgg aag caa gat aca cct aaa tcc aaa gca ggg tat gtt caa        966
Ser Gln Trp Lys Gln Asp Thr Pro Lys Ser Lys Ala Gly Tyr Val Gln
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gag gaa caa aag aaa cag gag aca cca aag ctg tgg cca gtt cag ctg       1014
Glu Glu Gln Lys Lys Gln Glu Thr Pro Lys Leu Trp Pro Val Gln Leu
            155                 160                 165

cag aaa gaa caa gat cca aag aag caa act cca aag tct tgg aca cct       1062
Gln Lys Glu Gln Asp Pro Lys Lys Gln Thr Pro Lys Ser Trp Thr Pro
        170                 175                 180

tcc atg cag agc gaa cag aac acc acc aag tca tgg acc act ccc atg       1110
Ser Met Gln Ser Glu Gln Asn Thr Thr Lys Ser Trp Thr Thr Pro Met
185                 190                 195                 200
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20

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tgt gaa gaa cag gat tca aaa cag cca gag act cca aaa tcc tgg gaa          1158
Cys Glu Glu Gln Asp Ser Lys Gln Pro Glu Thr Pro Lys Ser Trp Glu
            205             210             215

aac aat gtt gag agt caa aaa cac tct tta aca tca cag tca cag att          1206
Asn Asn Val Glu Ser Gln Lys His Ser Leu Thr Ser Gln Ser Gln Ile
            220             225             230

tct cca aag tcc tgg gga gta gct aca gca agc ctc ata cca aat gac          1254
Ser Pro Lys Ser Trp Gly Val Ala Thr Ala Ser Leu Ile Pro Asn Asp
            235             240             245

cag ctg ctg ccc agg aag ttg aac aca gaa ccc aaa gat gtg cct aag          1302
Gln Leu Leu Pro Arg Lys Leu Asn Thr Glu Pro Lys Asp Val Pro Lys
            250             255             260

cct gtg cat cag cct gta ggt tct tcc tct acc ctt ccg aag gat cca          1350
Pro Val His Gln Pro Val Gly Ser Ser Ser Thr Leu Pro Lys Asp Pro
265             270             275             280

gta ttg agg aaa gaa aaa ctg cag gat ctg atg act cag att caa gga          1398
Val Leu Arg Lys Glu Lys Leu Gln Asp Leu Met Thr Gln Ile Gln Gly
            285             290             295

act tgt aac ttt atg caa gag tct gtt ctt gac ttt gac aaa cct tca          1446
Thr Cys Asn Phe Met Gln Glu Ser Val Leu Asp Phe Asp Lys Pro Ser
            300             305             310

agt gca att cca acg tca caa ccg cct tca gct act cca ggt agc ccc          1494
Ser Ala Ile Pro Thr Ser Gln Pro Pro Ser Ala Thr Pro Gly Ser Pro
            315             320             325

gta gca tct aaa gaa caa aat ctg tcc agt caa agt gat ttt ctt caa          1542
Val Ala Ser Lys Glu Gln Asn Leu Ser Ser Gln Ser Asp Phe Leu Gln
330             335             340

gag ccg tta cag gta ttt aac gtt aat gca cct ctg cct cca cga aaa          1590
Glu Pro Leu Gln Val Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys
345             350             355             360

gaa caa gaa ata aaa gaa tcc cct tat tca cct ggc tac aat caa agt          1638
Glu Gln Glu Ile Lys Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser
            365             370             375

ttt acc aca gca agt aca caa aca cca ccc cag tgc caa ctg cca tct          1686
Phe Thr Thr Ala Ser Thr Gln Thr Pro Pro Gln Cys Gln Leu Pro Ser
            380             385             390

ata cat gta gaa caa act gtc cat tct caa gag act gca gca aat tat          1734
Ile His Val Glu Gln Thr Val His Ser Gln Glu Thr Ala Ala Asn Tyr
            395             400             405

cat cct gat gga act att caa gta agc aat ggt agc ctt gcc ttt tac          1782
His Pro Asp Gly Thr Ile Gln Val Ser Asn Gly Ser Leu Ala Phe Tyr
410             415             420

cca gca cag acg aat gtg ttt ccc aga cct act cag cca ttt gtc aat          1830
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21

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        Pro Ala Gln Thr Asn Val Phe Pro Arg Pro Thr Gln Pro Phe Val Asn
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        agc cgg gga tct gtt aga gga tgt act cgt ggt ggg aga tta ata acc      1878
        Ser Arg Gly Ser Val Arg Gly Cys Thr Arg Gly Gly Arg Leu Ile Thr
                        445             450             455


        aat tcc tat cgg tcc cct ggt ggt tat aaa ggt ttt gat act tat aga      1926
        Asn Ser Tyr Arg Ser Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg
                    460             465             470


        gga ctc cct tca att tcc aat gga aat tat agc cag ctg cag ttc caa      1974
        Gly Leu Pro Ser Ile Ser Asn Gly Asn Tyr Ser Gln Leu Gln Phe Gln
                    475             480             485


        gct aga gag tat tct gga gca cct tat tcc caa agg gat aat ttc cag      2022
        Ala Arg Glu Tyr Ser Gly Ala Pro Tyr Ser Gln Arg Asp Asn Phe Gln
            490             495             500


        cag tgt tat aag cga gga ggg aca tct ggt ggt cca cga gca aat tcg      2070
        Gln Cys Tyr Lys Arg Gly Gly Thr Ser Gly Gly Pro Arg Ala Asn Ser
        505             510             515             520


        aga gca ggg tgg agt gat tct tct cag gtg agc agc cca gaa aga gac      2118
        Arg Ala Gly Trp Ser Asp Ser Ser Gln Val Ser Ser Pro Glu Arg Asp
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        aac gaa acc ttt aac agt ggt gac tct gga caa gga gac tcc cgt agc      2166
        Asn Glu Thr Phe Asn Ser Gly Asp Ser Gly Gln Gly Asp Ser Arg Ser
                    540             545             550


        atg acc cct gtg gat gtg cca gtg aca aat cca gca gcc acc ata ctg      2214
        Met Thr Pro Val Asp Val Pro Val Thr Asn Pro Ala Ala Thr Ile Leu
                    555             560             565


        cca gta cac gtc tac cct ctg cct cag cag atg cga gtt gcc ttc tca      2262
        Pro Val His Val Tyr Pro Leu Pro Gln Gln Met Arg Val Ala Phe Ser
            570             575             580


        gca gcc aga acc tct aat ctg gcc cct gga act tta gac caa cct tat      2310
        Ala Ala Arg Thr Ser Asn Leu Ala Pro Gly Thr Leu Asp Gln Pro Tyr
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        ggt gtt gat ctt ctt ctg aac aac tta gga gaa act ttt gat ctt cag      2358
        Gly Val Asp Leu Leu Leu Asn Asn Leu Gly Glu Thr Phe Asp Leu Gln
                    605             610             615


        ctt ggt aga ttt aat tgc cca gtg aat ggc act tac gtt ttc att ttt      2406
        Leu Gly Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe Ile Phe
                    620             625             630


        cac atg cta aag ctg gca gtg aat gtg cca ctg tat gtc aac ctc atg      2454
        His Met Leu Lys Leu Ala Val Asn Val Pro Leu Tyr Val Asn Leu Met
                    635             640             645


        aag aat gaa gag gtc ttg gta tca gcc tat gcc aat gat ggt gct cca      2502
        Lys Asn Glu Glu Val Leu Val Ser Ala Tyr Ala Asn Asp Gly Ala Pro
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22

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gac cat gaa act gct agc aat cat gca att ctt cag ctc ttc cag gga    2550
Asp His Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe Gln Gly
665             670             675             680

gac cag ata tgg tta cgt ctg cac agg gga gca att tat gga agt agc    2598
Asp Gln Ile Trp Leu Arg Leu His Arg Gly Ala Ile Tyr Gly Ser Ser
                685             690             695

tgg aaa tat tct acg ttt tca ggc tat ctt ctt tat caa gat tga       2643
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<212> PRT

<213> Homo sapiens

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Val Lys Glu Ser Glu Ser Leu Met Glu Phe Ala Gln Pro Glu Ile Gln
            20                  25                  30


Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr Glu Val Asp Tyr Ser
            35                  40                  45


Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys
        50                  55                  60


Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr Glu Pro Asp Gly Gln
65                  70                  75                  80


Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu Ala Ser Gly Lys His
                85                  90                  95


Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp
                100                 105                 110


Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu
            115                 120                 125
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23

Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro
    130   135   140

Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu Gln Lys Lys Gln Glu Thr
145   150   155   160

Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys
            165   170   175

Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr
            180   185   190

Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln
        195   200   205

Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His
    210   215   220

Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala
225   230   235   240

Thr Ala Ser Leu Ile Pro Asn Asp Gln Leu Leu Pro Arg Lys Leu Asn
            245   250   255

Thr Glu Pro Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser
            260   265   270

Ser Ser Thr Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln
        275   280   285

Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser
    290   295   300

Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro
305   310   315   320

Pro Ser Ala Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu
            325   330   335

Ser Ser Gln Ser Asp Phe Leu Gln Glu Pro Leu Gln Val Phe Asn Val
            340   345   350

24

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Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro
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Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr
        370                 375                 380

Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His
385                 390                 395                 400

Ser Gln Glu Thr Ala Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val
                405                 410                 415

Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro
                420                 425                 430

Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys
        435                 440                 445

Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly
        450                 455                 460

Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly
465                 470                 475                 480

Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro
                485                 490                 495

Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys Tyr Lys Arg Gly Gly Thr
            500                 505                 510

Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala Gly Trp Ser Asp Ser Ser
        515                 520                 525

Gln Val Ser Ser Pro Glu Arg Asp Asn Glu Thr Phe Asn Ser Gly Asp
        530                 535                 540

Ser Gly Gln Gly Asp Ser Arg Ser Met Thr Pro Val Asp Val Pro Val
545                 550                 555                 560

Thr Asn Pro Ala Ala Thr Ile Leu Pro Val His Val Tyr Pro Leu Pro
                565                 570                 575
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25

Gln Gln Met Arg Val Ala Phe Ser Ala Ala Arg Thr Ser Asn Leu Ala
        580   585   590

Pro Gly Thr Leu Asp Gln Pro Tyr Gly Val Asp Leu Leu Leu Asn Asn
        595   600   605

Leu Gly Glu Thr Phe Asp Leu Gln Leu Gly Arg Phe Asn Cys Pro Val
        610   615   620

Asn Gly Thr Tyr Val Phe Ile Phe His Met Leu Lys Leu Ala Val Asn
625   630   635   640

Val Pro Leu Tyr Val Asn Leu Met Lys Asn Glu Glu Val Leu Val Ser
            645   650   655

Ala Tyr Ala Asn Asp Gly Ala Pro Asp His Glu Thr Ala Ser Asn His
        660   665   670

Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln Ile Trp Leu Arg Leu His
        675   680   685

Arg Gly Ala Ile Tyr Gly Ser Ser Trp Lys Tyr Ser Thr Phe Ser Gly
    690   695   700

Tyr Leu Leu Tyr Gln Asp
705   710

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<211> 2133

<212> DNA

<213> Homo sapiens

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tatatgacag aagtagatta ttcaaacaaa caaggcgaag agcaaccttg ggaagcagat   180

tatgctagaa aaccaaatct cccaaaacgt tgggatatgc ttactgaacc agatggtcaa   240

gagaagaaac aggagtcctt taagtcctgg gaggcttctg gtaagcacca ggaggtatcc   300

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aagcctgcag tttccttaga acagaggaaa caagacacct caaaactcag gtctactctg    360

ccggaagagc agaagaagca ggagatctcc aaatccaagc catctcctag ccagtggaag    420

caagatacac ctaaatccaa agcagggtat gttcaagagg aacaaaagaa acaggagaca    480

ccaaagctgt ggccagttca gctgcagaaa gaacaagatc caaagaagca aactccaaag    540

tcttggacac cttccatgca gagcgaacag aacaccacca agtcatggac cactcccatg    600

tgtgaagaac aggattcaaa acagccagag actccaaaat cctgggaaaa caatgttgag    660

agtcaaaaac actctttaac atcacagtca cagatttctc caaagtcctg gggagtagct    720

acagcaagcc tcataccaaa tgaccagctg ctgcccagga agttgaacac agaacccaaa    780

gatgtgccta agcctgtgca tcagcctgta ggttcttcct ctacccttcc gaaggatcca    840

gtattgagga agaaaaaact gcaggatctg atgactcaga ttcaaggaac ttgtaacttt    900

atgcaagagt ctgttcttga ctttgacaaa ccttcaagtg caattccaac gtcacaaccg    960

ccttcagcta ctccaggtag ccccgtagca tctaaagaac aaaatctgtc cagtcaaagt   1020

gattttcttc aagagccgtt acaggtattt aacgttaatg cacctctgcc tccacgaaaa   1080

gaacaagaaa taaaagaatc ccccttattca cctggctaca atcaaagttt taccacagca   1140

agtacacaaa caccacccca gtgccaactg ccatctatac atgtagaaca aactgtccat   1200

tctcaagaga ctgcagcaaa ttatcatcct gatggaacta ttcaagtaag caatggtagc   1260

cttgcctttt acccagcaca gacgaatgtg tttcccagac ctactcagcc atttgtcaat   1320

agccggggat ctgttagagg atgtactcgt ggtgggagat aataaccaa ttcctatcgg   1380

tcccctggtg gttataaagg ttttgatact tatagaggac tcccttcaat ttccaatgga   1440

aattatagcc agctgcagtt ccaagctaga gagtattctg gagcacctta ttcccaaagg   1500

gataatttcc agcagtgtta taagcgagga gggacatctg gtggtccacg agcaaattcg   1560

agagcagggt ggagtgattc ttctcaggtg agcagcccag aaagagacaa cgaaaccttt   1620

aacagtggtg actctggaca aggagactcc cgtagcatga ccctgtgga tgtgccagtg   1680

acaaatccag cagccaccat actgccagta cacgtctacc ctctgcctca gcagatgcga   1740

gttgccttct cagcagccag aacctctaat ctggcccctg aactttaga ccaaccttat   1800

ggtgttgatc ttcttctgaa caacttagga gaaacttttg atcttcagct tggtagattt   1860

aattgcccag tgaatggcac ttacgttttc attttcaca tgctaaagct ggcagtgaat   1920

gtgccactgt atgtcaacct catgaagaat gaagaggtct tggtatcagc ctatgccaat   1980

gatggtgctc cagaccatga aactgctagc aatcatgcaa ttcttcagct cttccaggga   2040
```

27

gaccagatat ggttacgtct gcacagggga gcaatttatg gaagtagctg gaaatattct   2100

acgttttcag gctatcttct ttatcaagat tga   2133

<210> 17

<211> 36

<212> PRT

<213> Homo sapiens

<400> 17

Pro Tyr Gly Val Asp Leu Leu Leu Asn Asn Leu Gly Glu Thr Phe Asp
1   5   10   15

Leu Gln Leu Gly Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe
            20   25   30

Ile Phe His Met
        35

<210> 18

<211> 22

<212> PRT

<213> Homo sapiens

<400> 18

Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln
1   5   10   15

Ile Trp Leu Arg Leu His
            20

<210> 19

<211> 20

<212> PRT

<213> Homo sapiens

28

<400> 19

Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln
1   5   10   15

Ile Trp Leu Arg
              20

<210> 20

<211> 11

<212> PRT

<213> Homo sapiens

<400> 20

Lys Tyr Ser Thr Phe Ser Gly Tyr Leu Leu Tyr
1   5   10

<210> 21

<211> 10

<212> PRT

<213> Homo sapiens

<400> 21

Ser Thr Phe Ser Gly Tyr Leu Leu Tyr Gln
1   5   10

<210> 22

<211> 20

<212> PRT

<213> Homo sapiens

<400> 22

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Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe Ile Phe His Met Leu
1               5                   10                  15


Lys Leu Ala Val
            20



<210>  23

<211>  815

<212>  PRT

<213>  Homo sapiens



<400>  23

Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly Asn Tyr Ser
1               5                   10                  15


Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro Tyr Ser Gln
            20                  25                  30


Arg Ile Ser Ala Ile Thr Thr Val Ser Val Ala Trp Lys Val Leu Ser
            35                  40                  45


Gly Lys Ile Gly Glu Gly Ala Glu Gly Asn Cys Lys Cys Val Ile Ser
    50                  55                  60


Glu Gly Ala Trp Ala Val Cys Pro Thr Gln Pro Cys Gly Lys Ala Lys
65                  70                  75                  80


Pro Asp Lys His Leu Lys Asp Leu Leu Ser Lys Leu Leu Asn Ser Gly
                85                  90                  95


Tyr Phe Glu Ser Ile Pro Val Pro Lys Asn Ala Lys Glu Lys Glu Val
                100                 105                 110


Pro Leu Glu Glu Glu Met Leu Ile Gln Ser Glu Lys Lys Thr Gln Leu
                115                 120                 125


Ser Lys Thr Glu Ser Val Lys Glu Ser Glu Ser Leu Met Glu Phe Ala
    130                 135                 140


Gln Pro Glu Ile Gln Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr
```

30

Glu Val Asp Tyr Ser Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala
                165   170   175

Asp Tyr Ala Arg Lys Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr
            180   185   190

Glu Pro Asp Gly Gln Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu
            195   200   205

Ala Ser Gly Lys His Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu
    210   215   220

Gln Arg Lys Gln Asp Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu
225   230   235   240

Gln Lys Lys Gln Glu Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp
            245   250   255

Lys Gln Asp Thr Pro Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu His
            260   265   270

Lys Lys Gln Glu Thr Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu
    275   280   285

Gln Asp Pro Lys Lys Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln
    290   295   300

Ser Glu Gln Asn Thr Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu
305   310   315   320

Gln Asp Ser Lys Gln Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val
            325   330   335

Glu Ser Gln Lys His Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys
            340   345   350

Ser Trp Gly Val Ala Thr Ala Ser Leu Ile Pro Asn Asp Gln Leu Leu
            355   360   365

Pro Arg Lys Leu Asn Thr Glu Pro Lys Asp Val Pro Ile Ala Cys Ala
    370   375   380

31

```
Ser Ala Gly Phe Leu Pro Leu Gln Pro Pro Phe Arg Arg Ile His Val
385             390             395                     400


Leu Arg Lys Glu Lys Leu Gln Asp Leu Met Thr Gln Ile Gln Gly Thr
                405             410             415


Cys Asn Phe Met Gln Glu Ser Val Leu Asp Phe Asp Lys Pro Ser Ser
                420             425             430


Ala Ile Pro Thr Ser Gln Pro Pro Ser Ala Thr Pro Gly Pro Arg Arg
            435             440             445


His Leu Lys Glu Gln Asn Leu Ser Val Lys Val Ile Phe Phe Gln Gly
        450             455             460


Ala Val Thr Val Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys Glu
465                 470             475                     480


Gln Glu Ile Lys Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe
                485             490             495


Thr Thr Ala Ser Thr Gln Thr Pro Pro Gln Cys Gln Leu Pro Ser Ile
            500             505             510


His Val Glu Gln Thr Val His Ser Gln Glu Thr Ala Asn Tyr His Pro
        515             520             525


Asp Gly Thr Ile Gln Val Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala
    530             535             540


Gln Thr Asn Val Phe Pro Arg Pro Thr Gln Pro Phe Val Asn Ser Arg
545             550             555                     560


Gly Ser Val Arg Gly Cys Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser
                565             570                     575


Tyr Arg Ser Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu
            580             585                 590


Pro Ser Ile Ser Asn Gly Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg
        595             600             605
```

32

Glu Tyr Ser Gly Ala Pro Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys
    610   615   620

Tyr Lys Arg Gly Gly Thr Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala
625   630   635   640

Gly Trp Ser Asp Ser Ser Gln Val Ser Ser Pro Glu Arg Asp Asn Glu
                645   650   655

Thr Phe Asn Ser Gly Asp Ser Gly Gln Gly Asp Ser Arg Ser Met Thr
                660   665   670

Pro Val Asp Val Pro Val Thr Asn Pro Ala Ala Thr Ile Leu Pro Val
            675   680   685

His Val Tyr Pro Leu Pro Gln Gln Met Arg Val Ala Phe Ser Ala Ala
    690   695   700

Arg Thr Ser Asn Leu Ala Pro Gly Thr Leu Asp Gln Pro Ile Val Phe
705   710   715   720

Asp Leu Leu Leu Asn Asn Leu Gly Glu Thr Phe Asp Leu Gln Leu Gly
                725   730   735

Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe Ile Phe His Met
                740   745   750

Leu Lys Leu Ala Val Asn Val Pro Leu Tyr Val Asn Leu Met Lys Asn
    755   760   765

Glu Glu Val Leu Val Ser Ala Tyr Ala Asn Asp Gly Ala Pro Asp His
    770   775   780

Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln
785   790   795   800

Ile Trp Leu Arg Leu His Arg Gly Ala Ile Tyr Gly Ser Ser Trp
                805   810   815

<210> 24

<211> 185

33

<212> PRT

<213> Homo sapiens

<400> 24

Gly Ala Ser Pro Asn Gln Gly Gln Asn Arg Pro His Ala Arg Gln Arg
1   5   10   15

Ala Pro Pro Gln Gly Pro Pro Gly Glu Pro Glu Arg Arg Ala Pro Leu
            20   25   30

Pro Ser Gly His Gly Glu Pro Cys Arg His Arg Pro Pro Pro Phe Pro
            35   40   45

Gln Pro Pro Ala Gly Thr Gln Lys Pro Leu Leu Gln Gly Pro Gly Gly
        50   55   60

Gly Pro Ala Glu Asn Ala Pro Thr Ala Ala Leu Gly Ser Pro Ala Pro
65   70   75   80

Pro Arg Gly Cys Gln Ala Ala Pro Pro Arg Ser Gly Ala Gly Arg
                85   90   95

Pro Asp Leu Pro Thr Leu Ala Gly Pro Arg Pro Ala Pro Ala Pro Pro
            100   105   110

Pro Ser Ala Ala Pro Pro Pro Pro Ser Gly Ala Pro Ser Arg Pro
        115   120   125

Ala Ala Gly Arg Gln Arg Leu Ser Gly Val Ser Ser Gly Pro Ser Leu
    130   135   140

Gly Trp Trp Val Gly Arg Gly Arg Gly Leu Pro Ala Phe Ala Gln Ile
145   150   155   160

Ala Gly His Gln Val Gly Pro Arg Arg Arg Thr Pro Ala Gly Arg
                165   170   175

Lys Pro Arg Ser Pro Ala Gly Pro Arg
            180   185

<210> 25

34

<211> 475

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(475)

<223> n = A, T, G, or C

<400> 25
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ntttgaacgc cctgcggtac cggtccggaa ttcccgggtc gacccacgcg tccggcctcc      60

cagggccccc tgggttccct ggtataggga aacccggagt ggcaggactt catggccccc     120

cagggaagcc tggtgccctt ggtcctcaag gccagcctgg ccttccagga cccccaggcc     180

ctccaggacc tccaggaccc ccagctgtga tgcccectac accaccaccc cagggagagt     240

atctgccaaa tatggggctg ggaattgatg gcgtgaaacc cccccatgcc tacggggcta     300

agaaaggcaa gaatggaggg ccagcctatg agatgcctgc atttaccgcc gagctaaccg     360

caccctttccc accggtgggg gccccagtga agtttaacaa actgctgtat aacggcagac     420

agaactacaa cccgcagaca ggcatcttca cctgtgaggt ccctggtgtc tacta          475
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<210> 26

<211> 3443

<212> DNA

<213> Homo sapiens

<400> 26
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gcacgagtaa ggacagaaaa gtgaaatgca gtatggtgaa gaggataccc tgaatatgta      60

tgaagacatg ctgttgtgag acggagttgt gaaacagagg ccacagaagc tgttgtgaag     120

gcagagcagc atctgctgaa gagacagaaa ccagccccag aggtgtcaca ggaaggcacc     180

agcaaggaca ttggtctttg atttgattca gcagtcctgt caagtataaa tgtgatggct     240

gtgctgcctg ccctctgca gctgctggga gtgctgctta ccatttccct gagttccatc     300
```

```
aggctcattc aggctggtgc ctactatggg atcaagccgc tgccacctca aattcctcct    360

cagatgccac cacaaattcc acaataccag cccctgggtc agcaagtacc tcacatgcct    420

ttggccaaag atggccttgc catgggcaag gagatgcccc acttgcagta tggcaaagag    480

tatccacacc taccccaata tatgaaggaa attcaaccgg cgccaagaat gggcaaggaa    540

gccgttccca agaaaggcaa agaaatacca ttagccagtt tacgagggga acaaggtccc    600

cgtggagagc ctggcccaag aggaccacct gggccccctg gtttaccagg tcatgggata    660

cctggaatta aaggaaaacc agggccacag ggatatccag gagttggaaa gccaggtatg    720

cctggaatgc cagggaagcc aggagccatg ggcatgcctg gggcaaaagg agaaattgga    780

cagaaagggg aaattgggcc tatggggatc ccatgaccac aaggacctcc agggcctcat    840

ggacttcctg gcattgggaa gccaggtggg ccagggttac cagggcaacc aggaccaaag    900

ggtgatcgag acccaaagg actaccagga cctcaaggcc ttcggggtcc taaaggagac    960

aagggcttcg ggatgccagg tgcgccaggt gtaaaggggc ctccagggat gcacggccct   1020

cccggccctg ttggactgcc aggagtgggc aaaccaggag tgacaggctt ccctgggccc   1080

ccagggcccc ctggggaaag ccaggggctc caggagaacc tgggccacaa ggccctattg   1140

gggtaccggg ggttcaagga cctcctggga tacccggaat tggaaagcca ggccaggatg   1200

gggatcccag gccagccagg atttccaggt ggcaaagggg agcaaggact gccagggcta   1260

ccaggacccc caggccttcc agggattggg aaaccaggct cccaggacc caaaggtgac   1320

cggggcatgg gaggtgttcc tggggctctt ggaccaagag gggagaaagg accaataggt   1380

gccccaggaa tagggggtcc tccaggagag ccaggcctgc ctggaatccc aggtcctatg   1440

ggccctccag gtgctattgg ttttcctgga cccaaaggag aaggtgggat tgtagggcca   1500

caggggccac caggtcccaa gggtgagcca gggcttcaag cttcccagg aaagccaggt   1560

ttccttggtg aagtagggcc tcctggcatg aggggtttcc caggtcccat aggccccaag   1620

ggggaacatg ggcaaaaagg tgtaccagga ctccctggtg ttccagggct tctcggacct   1680

aagggagaac caggaatccc aggggatcag ggtttacagg cccccccagg tatcccaggg   1740

attggggggcc ctagtggccc cattggacca cctgggattc caggccccaa aggggagcct   1800

ggcctcccag gcccccctgg gttccctggt atagggaaac ccggagtggc aggacttcat   1860

ggccccccag ggaagcctgg tgcccttggt cctcaaggcc agcctggcct tccaggaccc   1920

ccaggccctc caggacctcc aggaccccca gctgtgatgc cccctacacc accaccccag   1980
```

36

```
ggagagtatc tgccagatat ggggctggga attgatggcg tgaaacccccc ccatgcctac    2040

ggggctaaga aaggcaagaa tggagggcca gcctatgaga tgcctgcatt taccgccgag    2100

ctaaccgcac ctttcccacc ggtgggggcc ccagtgaagt ttaacaaact gctgtataac    2160

ggcagacaga actacaaccc gcagacaggc atcttcacct gtgaggtccc tggtgtctac    2220

tactttgcat accacgttca ctgcaagggg ggcaacgtgt gggttgctct attcaagaac    2280

aacgagcccg tgatgtacac gtacgacgag tacaaaaagg cttcctgga ccaggcatct     2340

gggagtgcag tgctgctgct caggcccgga gaccgggtgt cctccagat gccctcagaa     2400

caggctgcag gactgtatgc cgggcagtat gtccactcct cctttttcagg atatttattg   2460

tatcccatgt aaaaacaaaa aaacaaaaaa caaagaaaag aaagagattt tatagaagaa     2520

aatgacacac caaaaaatcc aaatgaaaaa cataattgct tcaaaacact tacacagttg     2580

gaaagttata tgtaagtgaa aatttggacc attgtgtaca aataaaaact aagatgcatg    2640

tttaatactc cacacagcag cctgtaattg cgaatgatgg gatagagtta tgtatcaagt     2700

actgacactt ggttgtaccc actggaatca tattagctgt tttatgttat atgcttccac     2760

agtaacctgc ttattcagat cagtcaaaat atatcagtat gaaagatcat agctaatgaa     2820

aggcactcac tcatattgtt tactttaaaa tatttataaa tatgccttaa agaaatacaa     2880

atgataacaa ttacataccg tatttacttg cttaatttcc tctgtatttg tgtagatact     2940

ttgacatgga atatatggtg gggagacccg tagtgttacc gccccagtgg gagggggccc    3000

tggggaccct ggtaatgctt tagtcaaagg gatatctctc ttgtatcaga ggctgtgtct    3060

tttagtaaca ggagtcctcg tcagaattgc gtgtctgttg tctctaaaag aatgggtgaa    3120

ccaatcggcc tttgtgaatt tattcagtgc cttctctgta ccaagcactg ggtaaggcac    3180

ttttgtggag cattagacag taaccctcaa ggagctagag aaccggatgg gagacatgag    3240

cggtaattaa ctcacttgtt ccccagagtt tctatttgtt ttgattttct ttttctgtga    3300

cttattttcc tattttcttt cctccatgta attttcacta tggcccaact aatataaaca    3360

cctggaaatt acaaggaaaa aaaattcttc ctctaataac tttccaaatt tgtggaatat    3420

ttatttggaa tagcaggtat cag                                            3443
```

<210> 27

<211> 2487

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (235)..(2469)

<223>

<400> 27

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gcacgagtaa ggacagaaaa gtgaaatgca gtatggtgaa gaggataccc tgaatatgta      60

tgaagacatg ctgttgtgag acggagttgt gaaacagagg ccacagaagc tgttgtgaag     120

gcagagcagc atctgctgaa gagacagaaa ccagccccag aggtgtcaca ggaaggcacc     180

agcaaggaca ttggtctttg atttgattca gcagtcctgt caagtataaa tgtg atg      237
                                                                 Met
                                                                 1
```

```
gct gtg ctg cct ggc cct ctg cag ctg ctg gga gtg ctg ctt acc att      285
Ala Val Leu Pro Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr Ile
              5                  10                  15
```

```
tcc ctg agt tcc atc agg ctc att cag gct ggt gcc tac tat ggg atc      333
Ser Leu Ser Ser Ile Arg Leu Ile Gln Ala Gly Ala Tyr Tyr Gly Ile
          20                  25                  30
```

```
aag ccg ctg cca cct caa att cct cct cag atg cca cca caa att cca      381
Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile Pro
      35                  40                  45
```

```
caa tac cag ccc ctg ggt cag caa gta cct cac atg cct ttg gcc aaa      429
Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro His Met Pro Leu Ala Lys
50                  55                  60                  65
```

```
gat ggc ctc gcc atg ggc aag gag atg ccc cac ttg cag tat ggc aaa      477
Asp Gly Leu Ala Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly Lys
                  70                  75                  80
```

```
gag tat cca cac cta ccc caa tat atg aag gaa att caa ccg gcg cca      525
Glu Tyr Pro His Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala Pro
                  85                  90                  95
```

```
aga atg ggc aag gaa gcc gtt ccc aag aaa ggc aaa gaa ata cca tta      573
Arg Met Gly Lys Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro Leu
              100                 105                 110
```

```
gcc agt tta cga ggg gaa caa ggt ccc cgt gga gag cct ggc cca aga      621
Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg
      115                 120                 125
```

38

```
gga cca cct ggg ccc cct ggt tta cca ggt cat ggg ata cct gga att          669
Gly Pro Pro Gly Pro Pro Gly Leu Pro Gly His Gly Ile Pro Gly Ile
130             135             140             145

aaa gga aaa cca ggg cca cag gga tat cca gga gtt gga aag cca ggt          717
Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly
            150             155             160

atg cct gga atg cca ggg aag cca gga gcc atg ggc atg cct ggg gca          765
Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala
            165             170             175

aaa gga gaa att gga cag aaa ggg gaa att ggg cct atg ggg atc cca          813
Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met Gly Ile Pro
            180             185             190

gga cca caa gga cct cca ggg cct cat gga ctt cct ggc att ggg aag          861
Gly Pro Gln Gly Pro Pro Gly Pro His Gly Leu Pro Gly Ile Gly Lys
        195             200             205

cca ggt ggg cca ggg tta cca ggg caa cca gga cca aag ggt gat cga          909
Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg
210             215             220             225

gga ccc aaa gga cta cca gga cct caa ggc ctt cgg ggt cct aaa gga          957
Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly
            230             235             240

gac aag ggc ttc ggg atg cca ggt gcg cca ggt gta aag ggg cct cca          1005
Asp Lys Gly Phe Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro
            245             250             255

ggg atg cac ggc cct ccc ggc cct gtt gga ctg cca gga gtg ggc aaa          1053
Gly Met His Gly Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys
        260             265             270

cca gga gtg aca ggc ttc cct ggg ccc cag ggc ccc ctg gga aag cca          1101
Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro
275             280             285

ggg gct cca gga gaa cct ggg cca caa ggc cct att ggg gta ccg ggg          1149
Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly
290             295             300             305

gtt caa gga cct cct ggg ata ccc gga att gga aag cca ggc cag gat          1197
Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln Asp
            310             315             320

ggg atc cca ggc cag cca gga ttt cca ggt ggc aaa ggg gag caa gga          1245
Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly
            325             330             335

ctg cca ggg cta cca gga ccc cca ggc ctt cca ggg att ggg aaa cca          1293
Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro
        340             345             350

ggc ttc cca gga ccc aaa ggt gac cgg ggc atg gga ggt gtt cct ggg          1341
```

39

```
                Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly Met Gly Gly Val Pro Gly
                355                     360                 365

gct ctt gga cca aga ggg gag aaa gga cca ata ggt gcc cca gga ata         1389
Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly Ile
370                     375                 380                 385

ggg ggt cct cca gga gag cca ggc ctg cct gga atc cca ggt cct atg         1437
Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met
                    390                 395                 400

ggc cct cca ggt gct att ggt ttt cct gga ccc aaa gga gaa ggt ggg         1485
Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly
                    405                 410                 415

att gta ggg cca cag ggg cca cca ggt ccc aag ggt gag cca ggg ctt         1533
Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu
                420                 425                 430

caa ggc ttc cca gga aag cca ggt ttc ctt ggt gaa gta ggg cct cct         1581
Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro
                435                 440                 445

ggc atg agg ggt ttc cca ggt ccc ata ggc ccc aag ggg gaa cat ggg         1629
Gly Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly
450                     455                 460                 465

caa aaa ggt gta cca gga ctc cct ggt gtt cca ggg ctt ctc gga cct         1677
Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro
                    470                 475                 480

aag gga gaa cca gga atc cca ggg gat cag ggt tta cag ggc ccc cca         1725
Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro
                    485                 490                 495

ggt atc cca ggg att ggg ggc cct agt ggc ccc att gga cca cct ggg         1773
Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly
                500                 505                 510

att cca ggc ccc aaa ggg gag cct ggc ctc cca ggg ccc cct ggg ttc         1821
Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe
                515                 520                 525

cct ggt ata ggg aaa ccc gga gtg gca gga ctt cat ggc ccc cca ggg         1869
Pro Gly Ile Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly
530                     535                 540                 545

aag cct ggt gcc ctt ggt cct caa ggc cag cct ggc ctt cca gga ccc         1917
Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro
                    550                 555                 560

cca ggc cct cca gga cct cca gga ccc cca gct gtg atg ccc cct aca         1965
Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr
                    565                 570                 575

cca cca ccc cag gga gag tat ctg cca gat atg ggg ctg gga att gat         2013
Pro Pro Pro Gln Gly Glu Tyr Leu Pro Asp Met Gly Leu Gly Ile Asp
```

40

```
ggc gtg aaa ccc ccc cat gcc tac ggg gct aag aaa ggc aag aat gga      2061
Gly Val Lys Pro Pro His Ala Tyr Gly Ala Lys Lys Gly Lys Asn Gly
    595                600                605

ggg cca gcc tat gag atg cct gca ttt acc gcc gag cta acc gca cct      2109
Gly Pro Ala Tyr Glu Met Pro Ala Phe Thr Ala Glu Leu Thr Ala Pro
610                615                620                625

ttc cca ccg gtg ggg gcc cca gtg aag ttt aac aaa ctg ctg tat aac      2157
Phe Pro Pro Val Gly Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn
                630                635                640

ggc aga cag aac tac aac ccg cag aca ggc atc ttc acc tgt gag gtc      2205
Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly Ile Phe Thr Cys Glu Val
                645                650                655

cct ggt gtc tac tac ttt gca tac cac gtt cac tgc aag ggg ggc aac      2253
Pro Gly Val Tyr Tyr Phe Ala Tyr His Val His Cys Lys Gly Gly Asn
                660                665                670

gtg tgg gtt gct cta ttc aag aac aac gag ccc gtg atg tac acg tac      2301
Val Trp Val Ala Leu Phe Lys Asn Asn Glu Pro Val Met Tyr Thr Tyr
    675                680                685

gac gag tac aaa aag ggc ttc ctg gac cag gca tct ggg agt gca gtg      2349
Asp Glu Tyr Lys Lys Gly Phe Leu Asp Gln Ala Ser Gly Ser Ala Val
690                695                700                705

ctg ctg ctc agg ccc gga gac cgg gtg ttc ctc cag atg ccc tca gaa      2397
Leu Leu Leu Arg Pro Gly Asp Arg Val Phe Leu Gln Met Pro Ser Glu
                710                715                720

cag gct gca gga ctg tat gcc ggg cag tat gtc cac tcc tcc ttt tca      2445
Gln Ala Ala Gly Leu Tyr Ala Gly Gln Tyr Val His Ser Ser Phe Ser
                725                730                735

gga tat tta ttg tat ccc atg taa aaacaaaaaa aaaaaaaa                  2487
Gly Tyr Leu Leu Tyr Pro Met
        740
```

<210> 28

<211> 744

<212> PRT

<213> Homo sapiens

<400> 28

```
Met Ala Val Leu Pro Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr
1               5                   10                  15
```

Ile Ser Leu Ser Ser Ile Arg Leu Ile Gln Ala Gly Ala Tyr Tyr Gly
            20   25   30

Ile Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile
            35   40   45

Pro Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro His Met Pro Leu Ala
        50   55   60

Lys Asp Gly Leu Ala Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly
65   70   75   80

Lys Glu Tyr Pro His Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala
                85   90   95

Pro Arg Met Gly Lys Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro
                100   105   110

Leu Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro
            115   120   125

Arg Gly Pro Pro Gly Pro Pro Gly Leu Pro Gly His Gly Ile Pro Gly
        130   135   140

Ile Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro
145   150   155   160

Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly
                165   170   175

Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met Gly Ile
            180   185   190

Pro Gly Pro Gln Gly Pro Pro Gly Pro His Gly Leu Pro Gly Ile Gly
        195   200   205

Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp
    210   215   220

Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys
225   230   235   240

42

```
Gly Asp Lys Gly Phe Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro
          245                 250                 255

Pro Gly Met His Gly Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly
          260                 265                 270

Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys
          275                 280                 285

Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro
          290                 295                 300

Gly Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln
305                 310                 315                 320

Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln
                  325                 330                 335

Gly Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys
                  340                 345                 350

Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly Met Gly Gly Val Pro
          355                 360                 365

Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly
          370                 375                 380

Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro
385                 390                 395                 400

Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly
                  405                 410                 415

Gly Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly
                  420                 425                 430

Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro
          435                 440                 445

Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His
          450                 455                 460
```

43

```
Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly
465             470             475             480

Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro
                485             490             495

Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro
            500             505             510

Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly
            515             520             525

Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro
    530             535             540

Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly
545             550             555             560

Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro
            565             570             575

Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro Asp Met Gly Leu Gly Ile
            580             585             590

Asp Gly Val Lys Pro Pro His Ala Tyr Gly Ala Lys Lys Gly Lys Asn
    595             600             605

Gly Gly Pro Ala Tyr Glu Met Pro Ala Phe Thr Ala Glu Leu Thr Ala
    610             615             620

Pro Phe Pro Pro Val Gly Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr
625             630             635             640

Asn Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly Ile Phe Thr Cys Glu
            645             650             655

Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val His Cys Lys Gly Gly
        660             665             670

Asn Val Trp Val Ala Leu Phe Lys Asn Asn Glu Pro Val Met Tyr Thr
        675             680             685

Tyr Asp Glu Tyr Lys Lys Gly Phe Leu Asp Gln Ala Ser Gly Ser Ala
```

44

```
Val Leu Leu Leu Arg Pro Gly Asp Arg Val Phe Leu Gln Met Pro Ser
705                     710                 715                 720


Glu Gln Ala Ala Gly Leu Tyr Ala Gly Gln Tyr Val His Ser Ser Phe
                    725                 730                 735


Ser Gly Tyr Leu Leu Tyr Pro Met
                740
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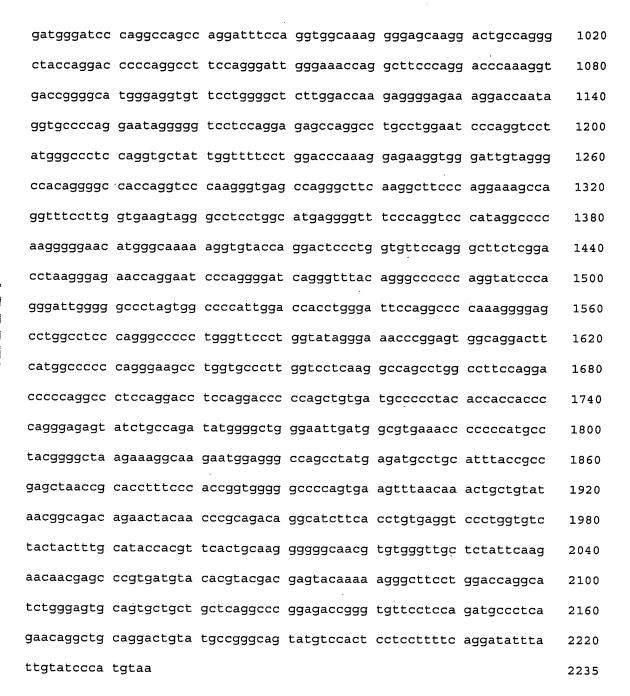
<210> 29

<211> 2235

<212> DNA

<213> Homo sapiens

<400> 29

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atggctgtgc tgcctggccc tctgcagctg ctgggagtgc tgcttaccat ttccctgagt      60

tccatcaggc tcattcaggc tggtgcctac tatgggatca agccgctgcc acctcaaatt     120

cctcctcaga tgccaccaca aattccacaa taccagcccc tgggtcagca agtacctcac     180

atgcctttgg ccaaagatgg cctcgccatg ggcaaggaga tgccccactt gcagtatggc     240

aaagagtatc cacacctacc ccaatatatg aaggaaattc aaccggcgcc aagaatgggc     300

aaggaagccg ttcccaagaa aggcaaagaa ataccattag ccagtttacg aggggaacaa     360

ggtccccgtg agagcctggg cccaagagga ccacctgggc cccctggttt accaggtcat     420

gggatacctg gaattaaagg aaaaccaggg ccacagggat atccaggagt tggaaagcca     480

ggtatgcctg gaatgccagg gaagccagga gccatgggca tgcctggggc aaaaggagaa     540

attggacaga aggggaaat tgggcctatg gggatcccag accacaagg acctccaggg     600

cctcatggac ttcctggcat tgggaagcca ggtgggccag ggttaccagg caaccagga     660

ccaaagggtg atcgaggacc caaaggacta ccaggacctc aaggccttcg gggtcctaaa     720

ggagacaagg gcttcgggat gccaggtgcg ccaggtgtaa aggggcctcc agggatgcac     780

ggccctcccg gccctgttgg actgccagga gtgggcaaac caggagtgac aggcttccct     840

gggccccagg gcccccctggg aaagccaggg gctccaggag aacctgggcc acaaggccct     900

attggggtac cgggggttca aggacctcct gggatacccg gaattggaaa gccaggccag     960
```

                                         45

```
gatgggatcc caggccagcc aggatttcca ggtggcaaag gggagcaagg actgccaggg    1020

ctaccaggac ccccaggcct tccagggatt gggaaaccag gcttcccagg acccaaaggt    1080

gaccggggca tgggaggtgt tcctggggct cttggaccaa gaggggagaa aggaccaata    1140

ggtgccccag aatagggggg tcctccagga gagccaggcc tgcctggaat cccaggtcct    1200

atgggccctc caggtgctat tggttttcct ggacccaaag gagaaggtgg gattgtaggg    1260

ccacaggggc caccaggtcc caagggtgag ccagggcttc aaggcttccc aggaaagcca    1320

ggtttccttg gtgaagtagg gcctcctggc atgaggggtt tcccaggtcc cataggcccc    1380

aagggggaac atgggcaaaa aggtgtacca ggactccctg gtgttccagg gcttctcgga    1440

cctaagggag aaccaggaat cccagggggt cagggtttac agggcccccc aggtatccca    1500

gggattgggg gccctagtgg ccccattgga ccacctggga ttccaggccc caaaggggag    1560

cctggcctcc cagggccccc tgggttccct ggtatagggа aacccggagt ggcaggactt    1620

catggccccc cagggaagcc tggtgccctt ggtcctcaag gccagcctgg ccttccagga    1680

cccccaggcc ctccaggacc tccaggaccc ccagctgtga tgccccctac accaccaccc    1740

cagggagagt atctgccaga tatggggctg ggaattgatg gcgtgaaacc cccccatgcc    1800

tacggggcta agaaaggcaa gaatggaggg ccagcctatg agatgcctgc atttaccgcc    1860

gagctaaccg cacctttccc accggtgggg gccccagtga agtttaacaa actgctgtat    1920

aacggcagac agaactacaa cccgcagaca ggcatcttca cctgtgaggt ccctggtgtc    1980

tactactttg cataccacgt tcactgcaag gggggcaacg tgtgggttgc tctattcaag    2040

aacaacgagc ccgtgatgta cacgtacgac gagtacaaaa agggcttcct ggaccaggca    2100

tctgggagtg cagtgctgct gctcaggccc ggagaccggg tgttcctcca gatgccctca    2160

gaacaggctg caggactgta tgccgggcag tatgtccact cctccttttc aggatattta    2220

ttgtatccca tgtaa                                                     2235
```

<210> 30

<211> 27

<212> PRT

<213> Homo sapiens

<400> 30

```
Met Ala Val Leu Pro Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr
1               5                   10                  15


Ile Ser Leu Ser Ser Ile Arg Leu Ile Gln Ala
            20                  25
```

<210> 31

<211> 717

<212> PRT

<213> Homo sapiens

<400> 31

```
Gly Ala Tyr Tyr Gly Ile Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln
1               5                   10                  15


Met Pro Pro Gln Ile Pro Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro
            20                  25                  30


His Met Pro Leu Ala Lys Asp Gly Leu Ala Met Gly Lys Glu Met Pro
        35                  40                  45


His Leu Gln Tyr Gly Lys Glu Tyr Pro His Leu Pro Gln Tyr Met Lys
    50                  55                  60


Glu Ile Gln Pro Ala Pro Arg Met Gly Lys Glu Ala Val Pro Lys Lys
65                  70                  75                  80


Gly Lys Glu Ile Pro Leu Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg
                85                  90                  95


Gly Glu Pro Gly Pro Arg Gly Pro Pro Gly Pro Pro Gly Leu Pro Gly
            100                 105                 110


His Gly Ile Pro Gly Ile Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro
        115                 120                 125


Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala
    130                 135                 140
```

47

Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile
145   150   155   160

Gly Pro Met Gly Ile Pro Gly Pro Gln Gly Pro Pro Gly Pro His Gly
                 165   170   175

Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro
                 180   185   190

Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly
                 195   200   205

Leu Arg Gly Pro Lys Gly Asp Lys Gly Phe Gly Met Pro Gly Ala Pro
        210   215   220

Gly Val Lys Gly Pro Pro Gly Met His Gly Pro Pro Gly Pro Val Gly
225   230   235   240

Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln
                 245   250   255

Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly
                 260   265   270

Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro Gly Ile
        275   280   285

Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly
    290   295   300

Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu
305   310   315   320

Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly
                 325   330   335

Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro
                 340   345   350

Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro
        355   360   365

Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly

48

     370   375   380

Pro Lys Gly Glu Gly Gly Ile Val Gly Pro Gln Gly Pro Pro Gly Pro
385   390   395   400

Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu
           405   410   415

Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly
          420   425   430

Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val
          435   440   445

Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln
    450   455   460

Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly
465   470   475   480

Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu
          485   490   495

Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly
          500   505   510

Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln
          515   520   525

Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
    530   535   540

Ala Val Met Pro Pro Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro Asp
545   550   555   560

Met Gly Leu Gly Ile Asp Gly Val Lys Pro Pro His Ala Tyr Gly Ala
          565   570   575

Lys Lys Gly Lys Asn Gly Gly Pro Ala Tyr Glu Met Pro Ala Phe Thr
          580   585   590

Ala Glu Leu Thr Ala Pro Phe Pro Pro Val Gly Ala Pro Val Lys Phe
     595   600   605

Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly
    610   615   620

Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val
625   630   635   640

His Cys Lys Gly Gly Asn Val Trp Val Ala Leu Phe Lys Asn Asn Glu
                645   650   655

Pro Val Met Tyr Thr Tyr Asp Glu Tyr Lys Lys Gly Phe Leu Asp Gln
                660   665   670

Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg Val Phe
                675   680   685

Leu Gln Met Pro Ser Glu Gln Ala Ala Gly Leu Tyr Ala Gly Gln Tyr
    690   695   700

Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr Pro Met
705   710   715

<210>   32

<211>   36

<212>   PRT

<213>   Homo sapiens

<400>   32

Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr Asn
1   5   10   15

Pro Gln Thr Gly Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe
                20   25   30

Ala Tyr His Val
        35

<210>   33

<211>   20

50

<212> PRT

<213> Homo sapiens

<400> 33

Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val His
1   5   10   15

Cys Lys Gly Gly
            20

<210> 34

<211> 27

<212> PRT

<213> Homo sapiens

<400> 34

Phe Pro Pro Val Gly Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn
1   5   10   15

Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly Ile
            20   25

<210> 35

<211> 22

<212> PRT

<213> Homo sapiens

<400> 35

Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg
1   5   10   15

Val Phe Leu Gln Met Pro
            20

51

<210> 36

<211> 20

<212> PRT

<213> Homo sapiens

<400> 36

Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg
1   5   10   15

Val Phe Leu Gln
            20

<210> 37

<211> 27

<212> PRT

<213> Homo sapiens

<400> 37

Pro Gly Pro His Gly Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly
1   5   10   15

Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg
            20   25

<210> 38

<211> 29

<212> PRT

<213> Homo sapiens

<400> 38

Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly
1   5   10   15

Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu

52

<210> 39

<211> 27

<212> PRT

<213> Homo sapiens

<400> 39

Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly
1   5   10   15

Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro
            20   25

<210> 40

<211> 27

<212> PRT

<213> Homo sapiens

<400> 40

Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly
1   5   10   15

Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys
            20   25

<210> 41

<211> 27

<212> PRT

<213> Homo sapiens

<400> 41

Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly
1   5   10   15

53

Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro
            20   25

<210>   42

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   42

Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly
1   5   10   15

Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys
            20   25

<210>   43

<211>   11

<212>   PRT

<213>   Homo sapiens

<400>   43

Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr
1   5   10

<210>   44

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   44

Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly
1   5   10   15

54

Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg
          20   25

<210> 45

<211> 29

<212> PRT

<213> Homo sapiens

<400> 45

Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly
1   5   10   15

Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu
         20   25

<210> 46

<211> 27

<212> PRT

<213> Homo sapiens

<400> 46

Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly
1   5   10   15

Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro
         20   25

<210> 47

<211> 27

<212> PRT

<213> Homo sapiens

<400> 47

Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly
1   5   10   15

Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile
            20   25

<210> 48

<211> 27

<212> PRT

<213> Homo sapiens

<400> 48

Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly
1   5   10   15

Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro
            20   25

<210> 49

<211> 29

<212> PRT

<213> Homo sapiens

<400> 49

Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly
1   5   10   15

Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu
            20   25

<210> 50

<211> 27

<212> PRT

<213> Homo sapiens

<400> 50

Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly
1   5   10   15

Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly
            20   25

<210> 51

<211> 27

<212> PRT

<213> Homo sapiens

<400> 51

Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly
1   5   10   15

Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly
            20   25

<210> 52

<211> 27

<212> PRT

<213> Homo sapiens

<400> 52

Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly
1   5   10   15

Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro
            20   25

<210> 53

<211> 27

<212> PRT

<210> Homo sapiens

<400> 53

Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
            20   25

<210> 54

<211> 27

<212> PRT

<213> Homo sapiens

<400> 54

Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly
1   5   10   15

Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro
            20   25

<210> 55

<211> 27

<212> PRT

<213> Homo sapiens

<400> 55

Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly
1   5   10   15

Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val
            20   25

<210> 56

<211> 27

58

<212> PRT

<213> Homo sapiens

<400> 56

Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly
1   5   10   15

Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
            20   25

<210> 57

<211> 29

<212> PRT

<213> Homo sapiens

<400> 57

Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly
1   5   10   15

Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu
            20   25

<210> 58

<211> 29

<212> PRT

<213> Homo sapiens

<400> 58

Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly
1   5   10   15

Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu
            20   25

59

<210> 59

<211> 27

<212> PRT

<213> Homo sapiens

<400> 59

Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly
1   5   10   15

Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro
            20   25

<210> 60

<211> 27

<212> PRT

<213> Homo sapiens

<400> 60

Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly
1   5   10   15

Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro
            20   25

<210> 61

<211> 27

<212> PRT

<213> Homo sapiens

<400> 61

Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly
1   5   10   15

Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro

60

<210> 62

<211> 10

<212> PRT

<213> Homo sapiens

<400> 62

Ser Ser Phe Ser Gly Tyr Leu Leu Tyr Pro
1   5   10

<210> 63

<211> 27

<212> PRT

<213> Homo sapiens

<400> 63

Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly
1   5   10   15

Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln
            20   25

<210> 64

<211> 29

<212> PRT

<213> Homo sapiens

<400> 64

Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly
1   5   10 | 15

Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile
            20   25

<210> 65

<211> 29

<212> PRT

<213> Homo sapiens

<400> 65

Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly
1   5   10   15

Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu
            20   25

<210> 66

<211> 27

<212> PRT

<213> Homo sapiens

<400> 66

Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly
1   5   10   15

Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val
            20   25

<210> 67

<211> 27

<212> PRT

<213> Homo sapiens

<400> 67

Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly
1   5   10   15

62

Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro
            20   25

<210>   68

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   68

Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly
1   5   10   15

Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro
            20   25

<210>   69

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   69

Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly
1   5   10   15

Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro
            20   25

<210>   70

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   70

63

Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly
1   5   10   15

Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln
            20   25

<210>   71

<211>   27·

<212>   PRT

<213>   Homo sapiens

<400>   71

Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly
1   5   10   15

Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly
            20   25

<210>   72

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   72

Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly
1   5   10   15

Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro
            20   25

<210>   73

<211>   27

<212>   PRT

<213>   Homo sapiens

<400> 73

Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly
1   5   10   15

Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro
            20   25

<210> 74

<211> 27

<212> PRT

<213> Homo sapiens

<400> 74

Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly
1   5   10   15

Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys
            20   25

<210> 75

<211> 27

<212> PRT

<213> Homo sapiens

<400> 75

Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly
1   5   10   15

Glu Pro Gly Ile Pro Gly Asp Gln Gly Leu Gln
            20   25

<210> 76

<211> 27

<212> PRT

65

<213>   Homo sapiens

<400>   76

Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly
1   5   10   15

Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His
            20   25

<210>   77

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   77

Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly
1   5   10   15

Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu
            20   25

<210>   78

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   78

Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly
1   5   10   15

Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys
            20   25

<210>   79

<211>   27

66

<212> PRT

<213> Homo sapiens

<400> 79

Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly
1   5   10   15

Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu
            20   25

<210> 80

<211> 27

<212> PRT

<213> Homo sapiens

<400> 80

Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly
1   5   10   15

Glu Gln Gly Leu Pro Gly Leu Pro Gly Pro Pro
            20   25

<210> 81

<211> 27

<212> PRT

<213> Homo sapiens

<400> 81

Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro
            20   25

67

<210> 82

<211> 27

<212> PRT

<213> Homo sapiens

<400> 82

Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly
1   5   10   15

Glu Gly Gly Ile Val Gly Pro Gln Gly Pro Pro
                20   25

<210> 83

<211> 29

<212> PRT

<213> Homo sapiens

<400> 83

Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala
                20   25

<210> 84

<211> 27

<212> PRT

<213> Homo sapiens

<400> 84

Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly
1   5   10   15

Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro

<210>   85

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   85

Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly
1   5   10   15

Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile
                20   25

<210>   86

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   86

Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly
1   5   10   15

Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile
                20   25

<210>   87

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   87

Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly
1   5   10   15

Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro
            20   25

<210> 88

<211> 27

<212> PRT

<213> Homo sapiens

<400> 88

Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
1   5   10   15

Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro
            20   25

<210> 89

<211> 27

<212> PRT

<213> Homo sapiens

<400> 89

Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly
1   5   10   15

Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro
            20   25

<210> 90

<211> 27

<212> PRT

<213> Homo sapiens

<400> 90

Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln Gly
1   5   10   15

Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly
            20   25

<210> 91

<211> 27

<212> PRT

<213> Homo sapiens

<400> 91

Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro Gly
1   5   10   15

Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly
            20   25

<210> 92

<211> 27

<212> PRT

<213> Homo sapiens

<400> 92

Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly
1   5   10   15

Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys
            20   25

<210> 93

<211> 27

<212> PRT

<213> Homo sapiens

71

<400> 93

Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly
1   5   10   15

Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr
            20   25

<210> 94

<211> 29

<212> PRT

<213> Homo sapiens

<400> 94

Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly
1   5   10   15

Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile
            20   25

<210> 95

<211> 27

<212> PRT

<213> Homo sapiens

<400> 95

Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly
1   5   10   15

Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro
            20   25

<210> 96

<211> 27

<212> PRT

72

<213> Homo sapiens

<400> 96

Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly
1   5   10   15

Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro
                20   25

<210> 97

<211> 29

<212> PRT

<213> Homo sapiens

<400> 97

Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly
1   5   10   15

Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu
                20   25

<210> 98

<211> 27

<212> PRT

<213> Homo sapiens

<400> 98

Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly
1   5   10   15

Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln
                20   25

<210> 99

73

<211> 27

<212> PRT

<213> Homo sapiens

<400> 99

Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly
1   5   10   15

Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly
            20   25

<210> 100

<211> 29

<212> PRT

<213> Homo sapiens

<400> 100

Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly
1   5   10   15

Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro
            20   25

<210> 101

<211> 27

<212> PRT

<213> Homo sapiens

<400> 101

Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly
1   5   10   15

Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met
            20   25

74

<210> 102

<211> 27

<212> PRT

<213> Homo sapiens

<400> 102

Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly
1   5   10   15

Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro
            20   25

<210> 103

<211> 27

<212> PRT

<213> Homo sapiens

<400> 103

Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly
1   5   10   15

Pro Lys Gly Asp Arg Gly Met Gly Gly Val Pro
            20   25

<210> 104

<211> 29

<212> PRT

<213> Homo sapiens

<400> 104

Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro
        20   25

<210>   105

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   105

Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly
            20   25

<210>   106

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   106

Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly Met Gly Gly
1   5   10   15

Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro
            20   25

<210>   107

<211>   15

<212>   PRT

<213>   Homo sapiens

<400>   107

Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro

<210> 108

<211> 29

<212> PRT

<213> Homo sapiens

<400> 108

Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly
1   5   10   15

Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln
            20   25

<210> 109

<211> 27

<212> PRT

<213> Homo sapiens

<400> 109

Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly
1   5   10   15

Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro
            20   25

<210> 110

<211> 27

<212> PRT

<213> Homo sapiens

<400> 110

Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly
1   5   10   15

77

Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln
            20   25

<210>   111

<211>   33

<212>   PRT

<213>   Homo sapiens

<400>   111

Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro
1   5   10   15

Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro Gln
            20   25   30

Gly

<210>   112

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   112

Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly
1   5   10   15

Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met
            20   25

<210>   113

<211>   27

<212>   PRT

<213>   Homo sapiens

<400> 113

Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly
1   5   10   15

Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro
            20   25

<210> 114

<211> 27

<212> PRT

<213> Homo sapiens

<400> 114

Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly
1   5   10   15

Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp Lys
            20   25

<210> 115

<211> 27

<212> PRT

<213> Homo sapiens

<400> 115

Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly
            20   25

<210> 116

<211> 27

79

<212> PRT

<213> Homo sapiens

<400> 116

Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly
1   5   10   15

Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro
            20   25

<210> 117

<211> 27

<212> PRT

<213> Homo sapiens

<400> 117

Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly
1   5   10   15

Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly
            20   25

<210> 118

<211> 27

<212> PRT

<213> Homo sapiens

<400> 118

Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly
1   5   10   15

Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro
            20   25

<210> 119

<210> 27

<212> PRT

<213> Homo sapiens

<400> 119

Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly
1   5   10   15

Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly
                20   25

<210> 120

<211> 27

<212> PRT

<213> Homo sapiens

<400> 120

Pro Gly Val Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly
1   5   10   15

Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro
                20   25

<210> 121

<211> 29

<212> PRT

<213> Homo sapiens

<400> 121

Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly
1   5   10   15

Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile
                20   25

<210> 122

<211> 27

<212> PRT

<213> Homo sapiens

<400> 122

Gly Glu Gly Gly Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly
1   5   10   15

Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro
            20   25

<210> 123

<211> 29

<212> PRT

<213> Homo sapiens

<400> 123

Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly
1   5   10   15

Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu
            20   25

<210> 124

<211> 24

<212> PRT

<213> Homo sapiens

<400> 124

Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
1   5   10   15

82

Pro Pro Ala Val Met Pro Pro Thr
            20

<210> 125

<211> 27

<212> PRT

<213> Homo sapiens

<400> 125

Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly
1   5   10   15

Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro
            20   25

<210> 126

<211> 27

<212> PRT

<213> Homo sapiens

<400> 126

Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly
1   5   10   15

Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro
            20   25

<210> 127

<211> 29

<212> PRT

<213> Homo sapiens

<400> 127

Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly
1   5   10   15

Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro
            20   25

<210> 128

<211> 44

<212> PRT

<213> Homo sapiens

<400> 128

Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu
1   5   10   15

Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met
            20   25   30

Pro Pro Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro
        35   40

<210> 129

<211> 44

<212> PRT

<213> Homo sapiens

<400> 129

Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly Pro
1   5   10   15

Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly
            20   25   30

Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly
        35   40

<210> 130

84

<211> 44

<212> PRT

<213> Homo sapiens

<400> 130

Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro
1   5   10   15

Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro
            20   25   30

Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly
        35   40

<210> 131

<211> 29

<212> PRT

<213> Homo sapiens

<400> 131

Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly
1   5   10   15

Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu
            20   25

<210> 132

<211> 18

<212> PRT

<213> Homo sapiens

<400> 132

Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr
1   5   10   15

85

Pro Pro,

<210> 133

<211> 27

<212> PRT

<213> Homo sapiens

<400> 133

Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly
1   5   10   15

Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro
            20   25

<210> 134

<211> 27

<212> PRT

<213> Homo sapiens

<400> 134

Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly
1   5   10   15

Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro
            20   25

<210> 135

<211> 15

<212> PRT

<213> Homo sapiens

<400> 135

```
Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
1               5                   10                  15
```

<210> 136

<211> 27

<212> PRT

<213> Homo sapiens

<400> 136

```
Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala
1               5                   10                  15

Val Met Pro Pro Thr Pro Pro Pro Gln Gly Glu
            20                  25
```

<210> 137

<211> 27

<212> PRT

<213> Homo sapiens

<400> 137

```
Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro
1               5                   10                  15

Pro Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro
            20                  25
```

<210> 138

<211> 29

<212> PRT

<213> Homo sapiens

<400> 138

Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly
1   5   10   15

Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro
            20   25

<210> 139

<211> 27

<212> PRT

<213> Homo sapiens

<400> 139

Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly
1   5   10   15

Pro Met Gly Ile Pro Gly Pro Gln Gly Pro Pro
            20   25

<210> 140

<211> 35

<212> PRT

<213> Homo sapiens

<400> 140

Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly
1   5   10   15

Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu
            20   25   30

Arg Gly Pro
        35

<210> 141

<211> 27

<212> PRT

88

<213> Homo sapiens

<400> 141

Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly
1   5   10   15

Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln
            20   25

<210> 142

<211> 29

<212> PRT

<213> Homo sapiens

<400> 142

Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly
1   5   10   15

Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile
            20   25

<210> 143

<211> 29

<212> PRT

<213> Homo sapiens

<400> 143

Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro
            20   25

<210> 144

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   144

Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val Gly
1   5   10   15

Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro
            20   25

<210>   145

<211>   44

<212>   PRT

<213>   Homo sapiens

<400>   145

Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile
1   5   10   15

Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly
            20   25   30

Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly
            35   40

<210>   146

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   146

Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly
1   5   10   15

90

Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe
                20   25

<210>   147

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   147

Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly
1   5   10   15

Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp
                20   25

<210>   148

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   148

Gly Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly
1   5   10   15

Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu
                20   25

<210>   149

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   149

Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro
            20   25

<210> 150

<211> 15

<212> PRT

<213> Homo sapiens

<400> 150

Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro
1   5   10   15

<210> 151

<211> 29

<212> PRT

<213> Homo sapiens

<400> 151

Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly
1   5   10   15

Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro
            20   25

<210> 152

<211> 27

<212> PRT

<213> Homo sapiens

<400> 152

Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly

92

```
Gln Lys Gly Glu Ile Gly Pro Met Gly Ile Pro
            20                  25
```

<210> 153

<211> 29

<212> PRT

<213> Homo sapiens

<400> 153

```
Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly
1                5                   10                  15

Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val
            20                  25
```

<210> 154

<211> 27

<212> PRT

<213> Homo sapiens

<400> 154

```
Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg Gly
1                5                   10                  15

Pro Pro Gly Pro Pro Gly Leu Pro Gly His Gly
            20                  25
```

<210> 155

<211> 27

<212> PRT

<213> Homo sapiens

<400> 155

```
Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly
1               5                   10                  15

Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg
            20                  25
```

<210> 156

<211> 754

<212> PRT

<213> Homo sapiens

<400> 156

```
Phe Asp Ser Ala Val Leu Ser Ser Ile Asn Val Met Ala Val Leu Pro
1               5                   10                  15

Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr Ile Ser Leu Ser Ser
            20                  25                  30

Ile Arg Leu Ile Gln Ala Gly Ala Tyr Tyr Gly Ile Lys Pro Leu Pro
            35                  40                  45

Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile Pro Gln Tyr Gln Pro
        50                  55                  60

Leu Gly Gln Gln Val Pro His Met Pro Leu Ala Lys Asp Gly Leu Ala
65                  70                  75                  80

Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly Lys Glu Tyr Pro His
                85                  90                  95

Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala Pro Arg Met Gly Lys
            100                 105                 110

Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro Leu Ala Ser Leu Arg
            115                 120                 125

Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg Gly Pro Pro Gly
        130                 135                 140
```

94

Pro Pro Gly Leu Pro Gly His Gly Ile Pro Gly Ile Lys Gly Lys Pro
145   150   155   160

Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met
                   165   170   175

Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile
              180   185   190

Gly Gln Lys Gly Glu Ile Gly Pro Met Gly Ile Pro Pro Gln Gly Pro
         195   200   205

Pro Gly Pro His Gly Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly
    210   215   220

Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu
225   230   235   240

Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp Lys Gly Phe Gly
              245   250   255

Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly Pro
              260   265   270

Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly
         275   280   285

Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu
    290   295   300   .

Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro
305   310   315   320

Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln
              325   330   335

Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro
              340   345   350

Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro
    355   360   365

95

```
Lys Gly Asp Arg Gly Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg
    370             375             380

Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly
385             390             395             400

Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala
            405             410             415

Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val Gly Pro Gln
            420             425             430

Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly
        435             440             445

Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe
    450             455             460

Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro
465             470             475             480

Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly
            485             490             495

Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile
            500             505             510

Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys
        515             520             525

Gly Glu Pro Gly Leu Pro Gly Pro Gly Phe Pro Gly Ile Gly Lys
    530             535             540

Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu
545             550             555             560

Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly
            565             570             575

Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro Gln Gly
        580             585             590

Glu Tyr Leu Pro Asp Met Gly Leu Gly Ile Asp Gly Val Lys Pro Pro
```

His Ala Tyr Gly Ala Lys Lys Gly Lys Asn Gly Gly Pro Ala Tyr Glu
    610   615   620

Met Pro Ala Phe Thr Ala Glu Leu Thr Ala Pro Phe Pro Pro Val Gly
625   630   635   640

Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr
                645   650   655

Asn Pro Gln Thr Gly Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr
                660   665   670

Phe Ala Tyr His Val His Cys Lys Gly Gly Asn Val Trp Val Ala Leu
        675   680   685

Phe Lys Asn Asn Glu Pro Val Met Tyr Thr Tyr Asp Glu Tyr Lys Lys
    690   695   700

Gly Phe Leu Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro
705   710   715   720

Gly Asp Arg Val Phe Leu Gln Met Pro Ser Glu Gln Ala Ala Gly Leu
                725   730   735

Tyr Ala Gly Gln Tyr Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr
                740   745   750

Pro Met

<210>   157

<211>   443

<212>   DNA

<213>   Homo sapiens

<220>

<221>   misc_feature

<222> (1)..(443)

<223> n = A, T, G, or C

<400> 157
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cgcaccggnn nnccggttga cccacgcgtc cgcgctccct ctctctgcca ccgctcaaag     60

cctgggataa cgcttttgaa agcgaatcag gaaattactt aggaatcgga agccccaaag    120

aattatgaat aatcctcgct gccaaaggga aggggatttt gagcaaaagc tccacatctg    180

cgcacactag agttcaaaga ctccagctgt tggaaggtct tgtgagcaat gtttgagagg    240

taagactgga ccgctaggtc ttgccggtga gaaaggggac caaggaaaga ctgggaagaa    300

aggacccata tgaccatagg gagagaaagg agaagtaggt ccaattggtc ctcctggacc    360

caagggagac agaggagaac aaggggaccc cgggctgcct ggggtttttgc cgatgtggaa    420

gcatcctggc tcaaatccgg ctc                                          443
```

<210> 158

<211> 1397

<212> DNA

<213> Homo sapiens

<400> 158
```
ctcagagcgg tggaattcga acgcttttga aagcgaatca ggaaattact tatcaatctg     60

aagccccata taattatgaa taatcctcgc tgccaaaggg aaggggattt tgagcaaaag    120

ctccacatct gcgcacacta gagttcaaag actccagctg ttggaaggtc ttgtgagcaa    180

gagccaaaga tgtttgtctt gctctatgtt acaagttttg ccatttgtgc cagtggacaa    240

ccccgggggta atcagttgaa aggagagaac tactcccccca ggtatatctg cagcattcct    300

ggcttgcctg gacctccagg gcccctggga gcaaatggtt ccctgggcc catggtcgc    360

atcggccttc caggaagaga tggtagagac ggcaggaaag gagagaaagg tgaaaaggga    420

actgcaggtt tgagaggtaa gactggaccg ctaggtcttg ccggtgagaa aggggaccaa    480

ggagagactg ggaagaaagg acccatagga ccagagggag agaaaggaga gtaggtcca    540

attggtcctc ctggaccaaa gggagacaga ggagaacaag gggacccggg gctgcctgga    600

gtttgcagat gtggaagcat cgtgctcaaa tccgccttttt ctgttggcat cacaaccagc    660
```

98

```
tacccagaag aaagactacc tattatattt aacaaggtcc tcttcaacga gggagagcac      720

tacaaccctg ccacagggaa gttcatctgt gctttcccag ggatctatta cttttcttat      780

gatatcacat tggctaataa gcatctggca atcggactgg tacacaatgg gcaataccgg      840

ataaagacct tcgacgccaa cacaggaaac catgatgtgg cttcggggtc cacagtcatc      900

tatctgcagc cagaagatga agtctggctg agatttttct tcacagacca gaatggcctc      960

ttctcagacc caggttgggc agacagctta ttctccgggt ttctcttata cgttgacaca     1020

gattacctag attccatatc agaagatgat gaattgtgat caggaccaag atccctgtgg     1080

taaacactct gattgaatct ggggttccag aaggtggaac aagcaggaat gggatccaaa     1140

gagactccca ctcagattct aaagcattta aagacaattc tagcagaatt tatcaaaaca     1200

agatgaaaca cagaaaagtt gaaaccacaa caaaatgaat tctattaaag aatagcccca     1260

gatataaatt ctcttgaaag caatgttcat aaatatttaa gcaaattaaa gacaatgtta     1320

acaaattttc tattaaatgc cctgagtgat aaaaccagtt ggcaataata ttgccttatt     1380

aaatcttcaa aaaataa                                                    1397
```

```
<210>  159

<211>  1297

<212>  DNA

<213>  Homo sapiens


<220>

<221>  CDS

<222>  (80)..(949)

<223>


<400>  159
cgcccggaat tcccgggtcg aggcacgcgt tcgatttaga atcctgcagc accccaccat       60

ctaagagcaa gagccaaag atg ttt gtc ttg ctc tat gtt aca agt ttt gcc      112
                      Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala
                       1               5                  10

att tgt gcc agt gga caa ccc cgg ggt aat cag ttg aaa gga gag aac      160
Ile Cys Ala Ser Gly Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn
         15                  20                  25
```

99

```
tac tcc ccc agg tat atc tgc agc att cct ggc ttg cct gga cct cca       208
Tyr Ser Pro Arg Tyr Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro
        30                  35                  40

ggg ccc cct gga gca aat ggt tcc cct ggg ccc cat ggt cgc atc ggc       256
Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly
        45                  50                  55

ctt cca gga aga gat ggt aga gac ggc agg aaa gga gag aaa ggt gaa       304
Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu
60                  65                  70                  75

aag gga act gca ggt ttg aga ggt aag act gga ccg cta ggt ctt gcc       352
Lys Gly Thr Ala Gly Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala
                    80                  85                  90

ggt gag aaa ggg gac caa gga gag act ggg aag aaa gga ccc ata gga       400
Gly Glu Lys Gly Asp Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly
                95                  100                 105

cca gag gga gag aaa gga gaa gta ggt cca att ggt cct cct gga cca       448
Pro Glu Gly Glu Lys Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro
                110                 115                 120

aag gga gac aga gga gaa caa ggg gac ccg ggg ctg cct gga gtt tgc       496
Lys Gly Asp Arg Gly Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys
            125                 130                 135

aga tgt gga agc atc gtg ctc aaa tcc gcc ttt tct gtt ggc atc aca       544
Arg Cys Gly Ser Ile Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr
140                 145                 150                 155

acc agc tac cca gaa gaa aga cta cct att ata ttt aac aag gtc ctc       592
Thr Ser Tyr Pro Glu Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu
                160                 165                 170

ttc aac gag gga gag cac tac aac cct gcc aca ggg aag ttc atc tgt       640
Phe Asn Glu Gly Glu His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys
                175                 180                 185

gct ttc cca ggg atc tat tac ttt tct tat gat atc aca ttg gct aat       688
Ala Phe Pro Gly Ile Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn
            190                 195                 200

aag cat ctg gca atc gga ctg gta cac aat ggg caa tac cgg ata aag       736
Lys His Leu Ala Ile Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys
            205                 210                 215

acc ttc gac gcc aac aca gga aac cat gat gtg gct tcg ggg tcc aca       784
Thr Phe Asp Ala Asn Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr
220                 225                 230                 235

gtc atc tat ctg cag cca gaa gat gaa gtc tgg ctg gag att ttc ttc       832
Val Ile Tyr Leu Gln Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe
                240                 245                 250
```

100

```
aca gac cag aat ggc ctc ttc tca gac cca ggt tgg gca gac agc tta      880
Thr Asp Gln Asn Gly Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu
            255                 260                 265

ttc tcc ggg ttt ctc tta tac gtt gac aca gat tac cta gat tcc ata      928
Phe Ser Gly Phe Leu Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile
            270                 275                 280

tca gaa gat gat gaa ttg tga tcaggaccaa gatccctgtg gtaaacactc         979
Ser Glu Asp Asp Glu Leu
            285

tgattgaatc tggggttcca gaaggtggaa caagcaggaa tgggatccaa agagactccc    1039

actcagattc taaagcattt aaagacaatt ctagcagaat ttatcaaaac aagatgaaac    1099

acagaaaagt tgaaaccaca acaaaatgaa ttctattaaa gaatagcccc agatataaat    1159

tctcttgaaa gcaatgttca taaatattta agcaaattaa agacaatgtt aacaaatttt    1219

ctattaaatg ccctgagtga taaaaccagt tggcaataat attgccttat taaatcttca    1279

aaaaataaaa aaaaaaaa                                                   1297


<210>   160

<211>   289

<212>   PRT

<213>   Homo sapiens


<400>   160

Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly
1               5                   10                  15


Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr
            20                  25                  30


Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala
        35                  40                  45


Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp
    50                  55                  60


Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly
65                  70                  75                  80
```

101

```
Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp
                85                      90                  95

Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys
            100                 105                 110

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly
            115                 120                 125

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile
    130                 135                 140

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu
145                 150                 155                 160

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu
                165                 170                 175

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile
            180                 185                 190

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile
            195                 200                 205

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn
    210                 215                 220

Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln
225                 230                 235                 240

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly
                245                 250                 255

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu
            260                 265                 270

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu
            275                 280                 285

Leu
```

<210> 161

102

<211> 870

<212> DNA

<213> Homo sapiens

<400> 161
atgtttgtct tgctctatgt tacaagtttt gccatttgtg ccagtggaca accccggggt   60

aatcagttga aaggagagaa ctactccccc aggtatatct gcagcattcc tggcttgcct   120

ggacctccag ggccccctgg agcaaatggt tccctgggc cccatggtcg catcggcctt   180

ccaggaagag atggtagaga cggcaggaaa ggagagaaag gtgaaaaggg aactgcaggt   240

ttgagaggta agactggacc gctaggtctt gccggtgaga aggggacca aggagagact   300

gggaagaaag gacccatagg accagaggga gagaaggag aagtaggtcc aattggtcct   360

cctggaccaa agggagacag aggagaacaa ggggacccgg ggctgcctgg agtttgcaga   420

tgtggaagca tcgtgctcaa atccgccttt tctgttggca tcacaaccag ctacccagaa   480

gaaagactac ctattatatt taacaaggtc ctcttcaacg agggagagca ctacaaccct   540

gccacaggga agttcatctg tgctttccca gggatctatt acttttctta tgatatcaca   600

ttggctaata gcatctggc aatcggactg gtacacaatg gcaataccg ataaagacc   660

ttcgacgcca acacaggaaa ccatgatgtg gcttcggggt ccacagtcat ctatctgcag   720

ccagaagatg aagtctggct ggagattttc ttcacagacc agaatggcct cttctcagac   780

ccaggttggg cagacagctt attctccggg tttctcttat acgttgacac agattaccta   840

gattccatat cagaagatga tgaattgtga   870

<210> 162

<211> 16

<212> PRT

<213> Homo sapiens

<400> 162

Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly
1   5   10   15

103

<210> 163

<211> 273

<212> PRT

<213> Homo sapiens

<400> 163

Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr
1   5   10   15

Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala
                20   25   30

Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp
            35   40   45

Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly
        50   55   60

Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp
65   70   75   80

Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys
                85   90   95

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly
            100   105   110

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile
        115   120   125

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu
    130   135   140

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu
145   150   155   160

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile
                165   170   175

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile

104

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn
        195   200   205

Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln
        210   215   220

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly
225   230   235   240

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu
                245   250   255

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu
                260   265   270

Leu

<210> 164

<211> 36

<212> PRT

<213> Homo sapiens

<400> 164

Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu His Tyr Asn
1   5   10   15

Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile Tyr Tyr Phe
                20   25   30

Ser Tyr Asp Ile
        35

<210> 165

<211> 27

<212> PRT

<213> Homo sapiens

<400> 165

Tyr Pro Glu Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn
1   5   10   15

Glu Gly Glu His Tyr Asn Pro Ala Thr Gly Lys
            20   25

<210> 166

<211> 20

<212> PRT

<213> Homo sapiens

<400> 166

Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln Pro Glu Asp Glu
1   5   10   15

Val Trp Leu Glu
            20

<210> 167

<211> 22

<212> PRT

<213> Homo sapiens

<400> 167

Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln Pro Glu Asp Glu
1   5   10   15

Val Trp Leu Glu Ile Phe
            20

<210> 168

<211> 20

106

<212> PRT

<213> Homo sapiens

<400> 168

Phe Ile Cys Ala Phe Pro Gly Ile Tyr Tyr Phe Ser Tyr Asp Ile Thr
1   5   10   15

Leu Ala Asn Lys
            20

<210> 169

<211> 27

<212> PRT

<213> Homo sapiens

<400> 169

Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys
            20   25

<210> 170

<211> 27

<212> PRT

<213> Homo sapiens

<400> 170

Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly
1   5   10   15

Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro
            20   25

<210> 171

<211> 27

<212> PRT

<213> Homo sapiens

<400> 171

Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly
1   5   10   15

Arg Ile Gly Leu Pro Gly Arg Asp Gly Arg Asp
            20   25

<210> 172

<211> 29

<212> PRT

<213> Homo sapiens

<400> 172

Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly
1   5   10   15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu
            20   25

<210> 173

<211> 29

<212> PRT

<213> Homo sapiens

<400> 173

Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp Gln Gly Glu Thr Gly
1   5   10   15

Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys Gly Glu

<210> 174

<211> 27

<212> PRT

<213> Homo sapiens

<400> 174

Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly
1   5   10   15

Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp
            20   25

<210> 175

<211> 29

<212> PRT

<213> Homo sapiens

<400> 175

Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys Gly Glu Val Gly
1   5   10   15

Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly Glu
            20   25

<210> 176

<211> 11

<212> PRT

<213> Homo sapiens

<400> 176

Ala Asp Ser Leu Phe Ser Gly Phe Leu Leu Tyr
1   5   10

109

<210> 177

<211> 27

<212> PRT

<213> Homo sapiens

<400> 177

Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly
1   5   10   15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys
            20   25

<210> 178

<211> 29

<212> PRT

<213> Homo sapiens

<400> 178

Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu
            20   25

<210> 179

<211> 27

<212> PRT

<213> Homo sapiens

<400> 179

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly
1   5   10   15

Glu Lys Gly Thr Ala Gly Leu Arg Gly Lys Thr
            20   25

<210>   180

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   180

Gly Glu Lys Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly
1   5   10   15

Asp Arg Gly Glu Gln Gly Asp Pro Gly Leu Pro
            20   25

<210>   181

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   181

Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr
            20   25

<210>   182

<211>   305

<212>   PRT

<213>   Homo sapiens

<400>   182

111

```
Ser Ser Lys Thr Pro Ala Val Gly Arg Ser Cys Glu Gln Glu Pro Lys
1               5                   10                  15

Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly
                20                  25                  30

Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr
        35                  40                  45

Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala
    50                  55                  60

Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp
65                  70                  75                  80

Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly
            85                  90                  95

Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp
            100                 105                 110

Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys
            115                 120                 125

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly
    130                 135                 140

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile
145                 150                 155                 160

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu
            165                 170                 175

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu
            180                 185                 190

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile
    195                 200                 205

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile
    210                 215                 220

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn
```

112

Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln
              245   250   255

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly
              260   265   270

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu
              275   280   285

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu
              290   295   300

Leu
305

<210>   183

<211>   414

<212>   DNA

<213>   Homo sapiens

<400>   183
aggaaggctg attttatttta gccgtttctt ttttcttggt ttgcacagta tctgggtcca   60

gcctgcagcc ctagggtcca gttcagagtc tgtcatctga accatgagga tctggtggtt   120

tctgcttgcc attgaaatct gcacagggaa cataaactca caggacacct gcaggcaagg   180

gcaccctggc atccctggga accccggtca caatggtctg cctggaagag atggacgaga   240

cggagcgaag ggtgacaaag gcgatgcagg agaaccagga cgtcctggca gcccggggaa   300

ggatgggacg agtggagaga agggagaacg aggagcagat ggaaaagttg aagcaaaagg   360

catcaaaggt gatcaaggct caagaggatc ccagaaaaca tggccccaag gggc   414

<210>   184

<211>   792

<212>   DNA

<213>   Homo sapiens

<400> 184

aggaaggctg attttattta gccgtttctt ttttcttggt ttgcacagta tctgggtcca   60

gcctgcagcc ctagggtcca gttcagagtc tgtcatctga accatgagga tctggtggtt   120

tctgcttgcc attgaaatct gcacagggaa cataaactca caggacacct gcaggcaagg   180

gcaccctggc atccctggga accccggtca caatggtctg cctggaagag atggacgaga   240

cggagcgaag ggtgacaaag gcgatgcagg agaaccagga cgtcctggca gcccggggaa   300

ggatgggacg agtggagaga agggagaacg aggagcagat ggaaaagttg aagcaaaagg   360

catcaaaggt gatcaaggct caatgaggat ccccaggaaa acatggcccc aaggggcttg   420

cagggcccat gggagagaaa ggcctccgag gagagactgg gcctcagggg cagaagggga   480

ataagggtga cgtgggtccc actggtcctg aggggccaag gggcaacatt gggcctttgg   540

gcccaactgg tttaccgggc cccatgggcc ctattggaaa gcctggtccc aagggagaag   600

ctggacccac ggggccccag ggtgagccag gagtccgggg aataagaggc tggaaaggag   660

atcgaggaga gaaagggaaa atcggtgaga ctctagtctt gccaaaaagt gctttcactg   720

tggggctcac ggtgctgagc aagtttcctt cttcagatgt gcccattaaa tttgataaga   780

tccacatcac tg   792

<210>   185

<211>   951

<212>   DNA

<213>   Homo sapiens

<220>

<221>   CDS

<222>   (18)..(884)

<223>

<400>   185
agtctgtcat ctgaacc atg agg atc tgg tgg ctt ctg ctt gcc att gaa   50
                    Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu
                     1   5   10

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atc tgc aca ggg aac ata aac tca cag gac acc tgc agg caa ggg cac        98
Ile Cys Thr Gly Asn Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His
            15                  20                  25

cct ggc atc cct ggg aac ccc ggt cac aat ggt ctg cct gga aga gat        146
Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp
            30                  35                  40

gga cga gac gga gcg aag ggt gac aaa ggc gat gca gga gaa cca gga        194
Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
        45                  50                  55

cgt cct ggc agc ccg ggg aag gat ggg acg agt gga gag aag gga gaa        242
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
60                  65                  70                  75

cga gga gca gat gga aaa gtt gaa gca aaa ggc atc aaa ggt gat caa        290
Arg Gly Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln
                80                  85                  90

ggc tca aga gga tcc cca gga aaa cat ggc ccc aag ggg ctt gca ggg        338
Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly
            95                  100                 105

ccc atg gga gag aag ggc ctc cga gga gag act ggg cct cag ggg cag        386
Pro Met Gly Glu Lys Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln
            110                 115                 120

aag ggg aat aag ggt gac gtg ggt ccc act ggt cct gag ggg cca agg        434
Lys Gly Asn Lys Gly Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg
    125                 130                 135

ggc aac att ggg cct ttg ggc cca act ggt tta ccg ggc ccc atg ggc        482
Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly
140                 145                 150                 155

cct att gga aag cct ggt ccc aaa gga gaa gct gga ccc acg ggg ccc        530
Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro
                160                 165                 170

cag gat atg ccc att aaa ttt gat aag atc ctg tat aac gaa ttc aac        578
Gln Asp Met Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn
            175                 180                 185

cat tat gat aca gca gcg ggg aaa ttc acg tgc cac att gct ggg gtc        626
His Tyr Asp Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val
            190                 195                 200

tat tac ttc acc tac cac atc act gtt ttc tcc agg aat gtt cag gtg        674
Tyr Tyr Phe Thr Tyr His Ile Thr Val Phe Ser Arg Asn Val Gln Val
    205                 210                 215

tct ttg gtc aaa aat gga gta aaa ata ctg cac acc aaa gat gct tac        722
Ser Leu Val Lys Asn Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr
220                 225                 230                 235

atg agc tct gag gac cag gcc tct ggc ggc att gtc ctg cag ctg aag        770
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115

Met Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys
            240   245   250

ctc ggg gat gag gtg tgg ctg cag gtg aca gga gga gag agg ttc aat   818
Leu Gly Asp Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn
            255   260   265

ggc ttg ttt gct gat gag gac gat gac aca act ttc aca ggg ttc ctt   866
Gly Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu
        270   275   280

ctg ttc agc agc ccg tga cagaggagag tttaaaaatc cgccacacca   914
Leu Phe Ser Ser Pro
    285

tccatcagaa tcagcttggg atgaacttat tcagatg   951

<210> 186

<211> 288

<212> PRT

<213> Homo sapiens

<400> 186

Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn
1   5   10   15

Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly
            20   25   30

Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala
        35   40   45

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
    50   55   60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly
65   70   75   80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser
                85   90   95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
            100   105   110

116

```
Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly
        115             120             125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro
    130             135             140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro
145             150             155             160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro Ile
            165             170             175

Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala
            180             185             190

Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr
        195             200             205

His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn
    210             215             220

Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp
225             230             235             240

Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val
            245             250             255

Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp
        260             265             270

Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro
        275             280             285


<210>   187

<211>   867

<212>   DNA

<213>   Homo sapiens


<400>   187
atgaggatct ggtggcttct gcttgccatt gaaatctgca caggaacat aaactcacag     60
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117

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gacacctgca ggcaagggca ccctggcatc cctgggaacc ccggtcacaa tggtctgcct    120

ggaagagatg gacgagacgg agcgaagggt gacaaaggcg atgcaggaga accaggacgt    180

cctggcagcc cggggaagga tgggacgagt ggagagaagg gagaacgagg agcagatgga    240

aaagttgaag caaaaggcat caaaggtgat caaggctcaa gaggatcccc aggaaaacat    300

ggccccaagg ggcttgcagg gcccatggga gagaagggcc tccgaggaga gactgggcct    360

caggggcaga aggggaataa gggtgacgtg ggtcccactg gtcctgaggg gccaaggggc    420

aacattgggc ctttgggccc aactggttta ccgggcccca tgggccctat tggaaagcct    480

ggtcccaaag gagaagctgg acccacgggg ccccaggata tgcccattaa atttgataag    540

atcctgtata cgaattcaa ccattatgat acagcagcgg ggaaattcac gtgccacatt    600

gctggggtct attacttcac ctaccacatc actgtttttct ccaggaatgt tcaggtgtct    660

ttggtcaaaa atggagtaaa aatactgcac accaaagatg cttacatgag ctctgaggac    720

caggcctctg gcggcattgt cctgcagctg aagctcgggg atgaggtgtg gctgcaggtg    780

acaggaggag agaggttcaa tggcttgttt gctgatgagg acgatgacac aactttcaca    840

gggttccttc tgttcagcag cccgtga    867
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<210> 188

<211> 19

<212> PRT

<213> Homo sapiens

<400> 188

```
Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn
1               5                   10                  15

Ile Asn Ser
```


<210> 189

<211> 269

<212> PRT

<213> Homo sapiens

118

<400> 189

```
Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1               5               10              15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp
            20              25              30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp
        35              40              45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu
    50              55              60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys
65              70              75              80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg
            85              90              95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
            100             105             110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro
        115             120             125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys
    130             135             140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro Ile Lys Phe Asp
145             150             155             160

Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
            165             170             175

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
            180             185             190

Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys
        195             200             205
```

119

Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser
    210   215   220

Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln
225   230   235   240

Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp
                245   250   255

Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro
                260   265

<210> 190

<211> 36

<212> PRT

<213> Homo sapiens

<400> 190

Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp
1   5   10   15

Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe
                20   25   30

Thr Tyr His Ile
        35

<210> 191

<211> 22

<212> PRT

<213> Homo sapiens

<400> 191

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln Val Thr

120

20

<210> 192

<211> 20

<212> PRT

<213> Homo sapiens

<400> 192

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln
            20

<210> 193

<211> 20

<212> PRT

<213> Homo sapiens

<400> 193

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
1   5   10   15

Val Phe Ser Arg
            20

<210> 194

<211> 27

<212> PRT

<213> Homo sapiens

<400> 194

Thr Gly Pro Gln Asp Met Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn
1   5   10   15

Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
            20   25

<210> 195

<211> 27

<212> PRT

<213> Homo sapiens

<400> 195

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
            20   25

<210> 196

<211> 27

<212> PRT

<213> Homo sapiens

<400> 196

Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
1   5   10   15

Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro
            20   25

<210> 197

<211> 29

<212> PRT

<213> Homo sapiens

<400> 197

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Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
1               5                   10                  15

Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
            20                  25


<210>   198

<211>   29

<212>   PRT

<213>   Homo sapiens



<400>   198

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1               5                   10                  15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
            20                  25


<210>   199

<211>   29

<212>   PRT

<213>   Homo sapiens



<400>   199

Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
1               5                   10                  15

Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
            20                  25


<210>   200

<211>   27

<212>   PRT

<213>   Homo sapiens
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<400> 200

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
            20   25

<210> 201

<211> 27

<212> PRT

<213> Homo sapiens

<400> 201

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
1   5   10   15

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
            20   25

<210> 202

<211> 27

<212> PRT

<213> Homo sapiens

<400> 202

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
1   5   10   15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
            20   25

<210> 203

<211> 29

<212> PRT

<213> Homo sapiens

<400> 203

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
            20   25

<210> 204

<211> 27

<212> PRT

<213> Homo sapiens

<400> 204

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
            20   25

<210> 205

<211> 29

<212> PRT

<213> Homo sapiens

<400> 205

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
            20   25

<210> 206

125

<211> 29

<212> PRT

<213> Homo sapiens

<400> 206

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
            20   25

<210> 207

<211> 29

<212> PRT

<213> Homo sapiens

<400> 207

Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
1   5   10   15

Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
            20   25

<210> 208

<211> 11

<212> PRT

<213> Homo sapiens

<400> 208

Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
1   5   10

<210> 209

<211> 10

126

<212> PRT

<213> Homo sapiens

<400> 209

Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
1   5   10

<210> 210

<211> 27

<212> PRT

<213> Homo sapiens

<400> 210

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            20   25

<210> 211

<211> 27

<212> PRT

<213> Homo sapiens

<400> 211

Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
1   5   10   15

Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
            20   25

<210> 212

<211> 27

<212> PRT

<213> Homo sapiens

<400> 212

Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
1   5   10   15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
                20   25

<210> 213

<211> 29

<212> PRT

<213> Homo sapiens

<400> 213

Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
1   5   10   15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
                20   25

<210> 214

<211> 1176

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(1176)

<223> n = A, T, G, or C |

<220>

128

<221> CDS

<222> (18)..(920)

<223>

<400> 214
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agtctgtcat ctgaacc atg agg atc tgg tgg ctt ctg ctt gcc att gaa          50
                    Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu
                    1               5                   10

atc tgc aca ggg aac ata aac tca cag gac acc tgc agg caa ggg cac          98
Ile Cys Thr Gly Asn Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His
            15              20                  25

cct ggc atc cct ggg aac ccc ggt cac aat ggt ctg cct gga aga gat        146
Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp
            30              35                  40

gga cga gac gga gcg aag ggt gac aaa ggc gat gca gga gaa cca gga        194
Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
            45              50                  55

cgt cct ggc agc ccg ggg aag gat ggg acg agt gga gag aag gga gaa        242
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
60              65                  70                  75

cga gga gca gat gga aaa gtt gaa gca aaa ggc atc aaa ggt gat caa        290
Arg Gly Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln
                80                  85                  90

ggc tca aga gga tcc cca gga aaa cat ggc ccc aag ggg ctt gca ggg        338
Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly
                95                  100                 105

ccc atg gga gag aag ggc ctc cga gga gag act ggg cct cag ggg cag        386
Pro Met Gly Glu Lys Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln
            110                 115                 120

aag ggg aat aag ggt gac gtg ggt ccc act ggt cct gag ggg cca agg        434
Lys Gly Asn Lys Gly Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg
            125                 130                 135

ggc aac att ggg cct ttg ggc cca act ggt tta ccg ggc ccc atg ggc        482
Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly
140                 145                 150                 155

cct att gga aag cct ggt ccc aag gga gaa gct gga ccc acg ggg ccc        530
Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro
                    160                 165                 170

cag ggt gag cca gga gtc cgg gga ata aga ggc tgg aaa gga gat cga        578
Gln Gly Glu Pro Gly Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg
                175                 180                 185
```

129

```
gga gag aaa ggg aaa atc ggt gag act cta gtc ttg cca aaa agt gct      626
Gly Glu Lys Gly Lys Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala
        190                 195                 200

ttc act gtg ggg ctc acg gtg ctg agc aag ttt cct tct tca gat gtg      674
Phe Thr Val Gly Leu Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Val
    205                 210                 215

ccc att aaa ttt gat aag atc cac atc act gtt ttc tcc agg aat gtt      722
Pro Ile Lys Phe Asp Lys Ile His Ile Thr Val Phe Ser Arg Asn Val
220                 225                 230                 235

cag gtg tct ttg gtc aaa aac gga gta aaa ata ctg cac acc aga gat      770
Gln Val Ser Leu Val Lys Asn Gly Val Lys Ile Leu His Thr Arg Asp
                240                 245                 250

gct tac gtg agc tct gag gac cag gcc tct ggc agc att gtc ctg cag      818
Ala Tyr Val Ser Ser Glu Asp Gln Ala Ser Gly Ser Ile Val Leu Gln
                255                 260                 265

ctg aag ctc ggg gat gag atg tgg tgt gtg att cat cgt gtg gca aaa      866
Leu Lys Leu Gly Asp Glu Met Trp Cys Val Ile His Arg Val Ala Lys
            270                 275                 280

tgt ctc tcc atc tgt gat cct ttt aca gtg gcg tct tgt gtg cgc tct      914
Cys Leu Ser Ile Cys Asp Pro Phe Thr Val Ala Ser Cys Val Arg Ser
    285                 290                 295

cga tga gggcaaggtc acctctgctt tgaggggccg ggtttagtgg tctcctaccc      970
Arg
300

agagtgtcgg gtccgggaac tgcttctgca tgagccctt gctccacgtg aatctgaata     1030

gttcgttctg gcagtggcgg tgaattcgtc ctgccaggac ccgccctctg catacactca    1090

ggcgcacccc tgctaaagcc ctttaacttc agcgctacaa gtccttgctt aanaagccta    1150

tcccttgngc gntcacaggc cggatt                                        1176
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<210> 215

<211> 300

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(1176)

130

<223> n = A, T, G, or C

<400> 215

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Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn
1               5                   10                  15

Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly
            20                  25                  30

Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala
            35                  40                  45

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
        50                  55                  60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly
65                  70                  75                  80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser
                85                  90                  95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
            100                 105                 110

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly
        115                 120                 125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro
    130                 135                 140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro
145                 150                 155                 160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
            165                 170                 175

Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
            180                 185                 190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu
        195                 200                 205
```

131

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Val Pro Ile Lys Phe Asp
   210   215   220

Lys Ile His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val
225   230   235   240

Lys Asn Gly Val Lys Ile Leu His Thr Arg Asp Ala Tyr Val Ser Ser
          245   250   255

Glu Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp
        260   265   270

Glu Met Trp Cys Val Ile His Arg Val Ala Lys Cys Leu Ser Ile Cys
        275   280   285

Asp Pro Phe Thr Val Ala Ser Cys Val Arg Ser Arg
   290   295   300

<210> 216

<211> 903

<212> DNA

<213> Homo sapiens

<400> 216

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atgaggatct ggtggcttct gcttgccatt gaaatctgca cagggaacat aaactcacag      60

gacacctgca ggcaagggca ccctggcatc cctgggaacc ccggtcacaa tggtctgcct     120

ggaagagatg gacgagacgg agcgaagggt gacaaaggcg atgcaggaga accaggacgt     180

cctggcagcc cggggaagga tgggacgagt ggagagaagg gagaacgagg agcagatgga     240

aaagttgaag caaaaggcat caaaggtgat caaggctcaa gaggatcccc aggaaaacat     300

ggccccaagg ggcttgcagg gcccatggga gagaagggcc tccgaggaga gactgggcct     360

caggggcaga aggggaataa gggtgacgtg ggtcccactg gtcctgaggg gccaaggggc     420

aacattgggc ctttgggccc aactggttta ccgggcccca tgggccctat tggaaagcct     480

ggtcccaagg gagaagctgg acccacgggg ccccagggtg agccaggagt ccggggaata     540

agaggctgga aaggagatcg aggagagaaa gggaaaatcg gtgagactct agtcttgcca     600

aaaagtgctt tcactgtggg gctcacggtg ctgagcaagt ttccttcttc agatgtgccc     660
```

attaaatttg ataagatcca catcactgtt ttctccagga atgttcaggt gtctttggtc   720

aaaaacggag taaaaatact gcacaccaga gatgcttacg tgagctctga ggaccaggcc   780

tctggcagca ttgtcctgca gctgaagctc ggggatgaga tgtggtgtgt gattcatcgt   840

gtggcaaaat gtctctccat ctgtgatcct tttacagtgg cgtcttgtgt gcgctctcga   900

tga   903

<210> 217

<211> 281

<212> PRT

<213> Homo sapiens

<400> 217

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1   5   10   15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp
            20   25   30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp
            35   40   45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu
        50   55   60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys
65   70   75   80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg
                85   90   95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
            100   105   110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro
            115   120   125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys
        130   135   140

133

```
Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Arg Gly
145                 150                 155                 160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu
                    165                 170                 175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu
                180                 185                 190

Ser Lys Phe Pro Ser Ser Asp Val Pro Ile Lys Phe Asp Lys Ile His
            195                 200                 205

Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly
    210                 215                 220

Val Lys Ile Leu His Thr Arg Asp Ala Tyr Val Ser Ser Glu Asp Gln
225                 230                 235                 240

Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Met Trp
                245                 250                 255

Cys Val Ile His Arg Val Ala Lys Cys Leu Ser Ile Cys Asp Pro Phe
                260                 265                 270

Thr Val Ala Ser Cys Val Arg Ser Arg
            275                 280
```

<210> 218

<211> 27

<212> PRT

<213> Homo sapiens

<400> 218

```
Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
1                   5                   10                  15

Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro
                20                  25
```

134

<210> 219

<211> 27

<212> PRT

<213> Homo sapiens

<400> 219

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
            20   25

<210> 220

<211> 29

<212> PRT

<213> Homo sapiens

<400> 220

Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
            20   25

<210> 221

<211> 29

<212> PRT

<213> Homo sapiens

<400> 221

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
            20   25

<210>   222

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   222

Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
1   5   10   15

Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
            20   25

<210>   223

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   223

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
            20   25

<210>   224

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   224

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
            20   25

<210>   225

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   225

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
1   5   10   15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
            20   25

<210>   226

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   226

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
            20   25

<210>   227

<211>   27

<212>   PRT

<213>   Homo sapiens

137

<400> 227

Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
1   5   10   15

Glu Pro Gly Val Arg Gly Ile Arg Gly Trp Lys
            20   25

<210> 228

<211> 27

<212> PRT

<213> Homo sapiens

<400> 228

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
            20   25

<210> 229

<211> 29

<212> PRT

<213> Homo sapiens

<400> 229

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
            20   25

<210> 230

<211> 29

<212> PRT

<213> Homo sapiens

138

<400> 230

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
1   5   10   15

Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
                20   25

<210> 231

<211> 20

<212> PRT

<213> Homo sapiens

<400> 231

Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Met Trp Cys Val
                20

<210> 232

<211> 27

<212> PRT

<213> Homo sapiens

<400> 232

Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
1   5   10   15

Pro Gln Gly Glu Pro Gly Val Arg Gly Ile Arg
                20   25

<210> 233

<211> 22

139

<212> PRT

<213> Homo sapiens

<400> 233

Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Met Trp Cys Val Ile His
            20

<210> 234

<211> 29

<212> PRT

<213> Homo sapiens

<400> 234

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
            20   25

<210> 235

<211> 29

<212> PRT

<213> Homo sapiens

<400> 235

Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
1   5   10   15

Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
            20   25

<210> 236

140

<211> 27

<212> PRT

<213> Homo sapiens

<400> 236

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            20   25

<210> 237

<211> 27

<212> PRT

<213> Homo sapiens

<400> 237

Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
1   5   10   15

Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
            20   25

<210> 238

<211> 27

<212> PRT

<213> Homo sapiens

<400> 238

Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
1   5   10   15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
            20   25

141

<210> 239

<211> 29

<212> PRT

<213> Homo sapiens

<400> 239

Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
1   5   10   15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
            20   25

<210> 240

<211> 1026

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (25)..(1026)

<223>

<400> 240
tcagttcagt ctgtcatctg aacc atg agg atc tgg tgg ctt ctg ctt gcc   51
                          Met Arg Ile Trp Trp Leu Leu Leu Ala
                          1   5

att gaa atc tgc aca ggg aac ata aac tca cag gac acc tgc agg caa   99
Ile Glu Ile Cys Thr Gly Asn Ile Asn Ser Gln Asp Thr Cys Arg Gln
10   15   20   25

ggg cac cct ggc atc cct ggg aac ccc ggt cac aat ggt ctg cct gga   147
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                30   35   40

aga gat gga cga gac gga gcg aag ggt gac aaa ggc gat gca gga gaa   195
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu

142

```
                45                      50                      55

cca gga cgt cct ggc agc ccg ggg aag gat ggg acg agt gga gag aag      243
Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
        60                      65                      70

gga gaa cga gga gca gat gga aaa gtt gaa gca aaa ggc atc aaa ggt      291
Gly Glu Arg Gly Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys Gly
        75                      80                      85

gat caa ggc tca aga gga tcc cca gga aaa cat ggc ccc aag ggg ctt      339
Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly Leu
90                      95                      100                 105

gca ggg ccc atg gga gag aag ggc ctc cga gga gag act ggg cct cag      387
Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu Thr Gly Pro Gln
                    110                     115                 120

ggg cag aag ggg aat aag ggt gac gtg ggt ccc act ggt cct gag ggg      435
Gly Gln Lys Gly Asn Lys Gly Asp Val Gly Pro Thr Gly Pro Glu Gly
                125                     130                     135

cca agg ggc aac att ggg cct ttg ggc cca act ggt tta ccg ggc ccc      483
Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly Pro
            140                     145                     150

atg ggc cct att gga aag cct ggt ccc aaa gga gaa gct gga ccc acg      531
Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr
        155                     160                     165

ggg ccc cag ggt gag cca gga gtc cag gga ata aga ggc tgg aaa gga      579
Gly Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys Gly
170                     175                     180                 185

gat cga gga gag aaa ggg aaa atc ggt gag act cta gtc ttg cca aaa      627
Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu Thr Leu Val Leu Pro Lys
                190                     195                     200

agt gct ttc act gtg ggg ctc acg gtg ctg agc aag ttt cct tct tca      675
Ser Ala Phe Thr Val Gly Leu Thr Val Leu Ser Lys Phe Pro Ser Ser
                205                     210                     215

gat agg ccc att aaa ttt gat aag atc ctg tat aac gaa ttc aac cat      723
Asp Arg Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His
        220                     225                     230

tat gat aca gca gcg ggg aaa ttc acg tgc cac att gct ggg gtc tat      771
Tyr Asp Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr
        235                     240                     245

tac ttc acc tac cac atc act gtt ttc tcc aga aat gtt cag gtg tct      819
Tyr Phe Thr Tyr His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser
250                     255                     260                 265

ttg gtc aaa aat gga gta aaa ata ctg cac acc aaa gat gct tac atg      867
Leu Val Lys Asn Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met
                270                     275                     280
```

143

```
agc tct gag gac cag gcc tct ggc ggc att gtc ctg cag ctg aag ctc      915
Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu
        285             290             295

ggg gat gag gtg tgg ctg cag gtg aca gga gga gag agg ttc aat ggc      963
Gly Asp Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly
        300             305             310

ttg ttt gct gat gag gac gat gac aca act ttc aca ggg ttc ctt ctg     1011
Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu
        315             320             325

ttc agc agc ccg tga                                                  1026
Phe Ser Ser Pro
330
```

<210> 241

<211> 333

<212> PRT

<213> Homo sapiens

<400> 241

```
Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn
1               5                   10                  15

Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly
            20                  25                  30

Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala
        35                  40                  45

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
        50                  55                  60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly
65                  70                  75                  80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser
                85                  90                  95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
            100                 105                 110
```

144

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly
        115   120   125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro
        130   135   140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro
145   150   155   160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
                165   170   175

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
                180   185   190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu
                195   200   205

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp
        210   215   220

Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
225   230   235   240

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
                245   250   255

Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys
                260   265   270

Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser
        275   280   285

Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln
        290   295   300

Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp
305   310   315   320

Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro
                325   330

145

<210> 242

<211> 1002

<212> DNA

<213> Homo sapiens

<400> 242

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atgaggatct ggtggcttct gcttgccatt gaaatctgca cagggaacat aaactcacag      60

gacacctgca ggcaagggca ccctggcatc cctgggaacc ccggtcacaa tggtctgcct     120

ggaagagatg gacgagacgg agcgaagggt gacaaaggcg atgcaggaga accaggacgt     180

cctggcagcc cggggaagga tgggacgagt ggagagaagg gagaacgagg agcagatgga     240

aaagttgaag caaaaggcat caaaggtgat caaggctcaa gaggatcccc aggaaaacat     300

ggccccaagg ggcttgcagg gcccatggga gagaagggcc tccgaggaga gactgggcct     360

caggggcaga aggggaataa gggtgacgtg ggtcccactg gtcctgaggg gccaaggggc     420

aacattgggc ctttgggccc aactggttta ccgggcccca tgggccctat tggaaagcct     480

ggtcccaaag gagaagctgg acccacgggg ccccagggtg agccaggagt ccagggaata     540

agaggctgga aggagatcg aggagagaaa gggaaaatcg gtgagactct agtcttgcca     600

aaaagtgctt tcactgtggg gctcacggtg ctgagcaagt ttccttcttc agataggccc     660

attaaatttg ataagatcct gtataacgaa ttcaaccatt atgatacagc agcggggaaa     720

ttcacgtgcc acattgctgg ggtctattac ttcacctacc acatcactgt tttctccaga     780

aatgttcagg tgtctttggt caaaaatgga gtaaaaatac tgcacaccaa agatgcttac     840

atgagctctg aggaccaggc ctctggcggc attgtcctgc agctgaagct cggggatgag     900

gtgtggctgc aggtgacagg aggagagagg ttcaatggct tgtttgctga tgaggacgat     960

gacacaactt tcacagggtt ccttctgttc agcagcccgt ga                      1002
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<210> 243

<211> 314

<212> PRT

<213> Homo sapiens

<400> 243

146

```
Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1               5                   10                  15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp
            20              25                  30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp
            35              40                  45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu
    50              55                  60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys
65              70                  75                  80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg
            85                  90                  95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
            100             105                 110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro
        115             120                 125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys
    130             135                 140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Gln Gly
145             150             155                 160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu
            165             170                 175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu
        180             185                 190

Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile Leu
        195             200                 205

Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys Phe Thr Cys
    210             215                 220
```

147

His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr Val Phe Ser
225   230   235   240

Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys Ile Leu His
            245   250   255

Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile
            260   265   270

Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln Val Thr Gly
            275   280   285

Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr
            290   295   300

Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro
305   310

<210> 244

<211> 36

<212> PRT

<213> Homo sapiens

<400> 244

Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp
1   5   10   15

Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe
            20   25   30

Thr Tyr His Ile
        35

<210> 245

<211> 22

<212> PRT

<213> Homo sapiens

148

<400> 245

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln Val Thr
            20

<210> 246

<211> 20

<212> PRT

<213> Homo sapiens

<400> 246

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln
            20

<210> 247

<211> 20

<212> PRT

<213> Homo sapiens

<400> 247

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
1   5   10   15

Val Phe Ser Arg
            20

<210> 248

<211> 27

<212> PRT

149

<213>   Homo sapiens

<400>   248

Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn
1   5   10   15

Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
            20   25

<210>   249

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   249

Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
1   5   10   15

Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro
            20   25

<210>   250

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   250

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
            20   25

<210>   251

<211>   29

150

<212>   PRT

<213>   Homo sapiens

<400>   251

Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
            20   25

<210>   252

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   252

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
            20   25

<210>   253

<211>   29

<212>   PRT

<213>   Homo sapiens

<400>   253

Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
1   5   10   15

Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
            20   25

151

<210> 254

<211> 27

<212> PRT

<213> Homo sapiens

<400> 254

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
            20   25

<210> 255

<211> 27

<212> PRT

<213> Homo sapiens

<400> 255

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
1   5   10   15

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
            20   25

<210> 256

<211> 27

<212> PRT

<213> Homo sapiens

<400> 256

Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
1   5   10   15

Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys

<210> 257

<211> 27

<212> PRT

<213> Homo sapiens

<400> 257

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
1   5   10   15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
            20   25

<210> 258

<211> 29

<212> PRT

<213> Homo sapiens

<400> 258

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
            20   25

<210> 259

<211> 27

<212> PRT

<213> Homo sapiens

<400> 259

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
            20   25

<210> 260

<211> 29

<212> PRT

<213> Homo sapiens

<400> 260

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
            20   25

<210> 261

<211> 29

<212> PRT

<213> Homo sapiens

<400> 261

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
1   5   10   15

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
            20   25

<210> 262

<211> 29

<212> PRT

<213> Homo sapiens

<400> 262

154

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
            20   25

<210> 263

<211> 29

<212> PRT

<213> Homo sapiens

<400> 263

Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
1   5   10   15

Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
            20   25

<210> 264

<211> 11

<212> PRT

<213> Homo sapiens

<400> 264

Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
1   5   10

<210> 265

<211> 27

<212> PRT

<213> Homo sapiens

<400> 265

Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
1   5   10   15

Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg
            20   25

<210> 266

<211> 10

<212> PRT

<213> Homo sapiens

<400> 266

Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
1   5   10

<210> 267

<211> 27

<212> PRT

<213> Homo sapiens

<400> 267

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            20   25

<210> 268

<211> 27

<212> PRT

<213> Homo sapiens

<400> 268

Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly

```
Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
            20                  25
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<210> 269

<211> 27

<212> PRT

<213> Homo sapiens

<400> 269

```
Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
1                5                   10                  15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
            20                  25
```

<210> 270

<211> 29

<212> PRT

<213> Homo sapiens

<400> 270

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Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
1                5                   10                  15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
            20                  25
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<210> 271

<211> 945

<212> DNA

<213> Homo sapiens

157

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<220>

<221>   CDS

<222>   (25)..(945)

<223>


<400>  271
tcagttcagt ctgtcatctg aacc atg agg atc tgg tgg ctt ctg ctt gcc        51
                          Met Arg Ile Trp Trp Leu Leu Leu Ala
                          1               5

att gaa atc tgc aca ggg aac ata aac tca cag gac acc tgc agg caa        99
Ile Glu Ile Cys Thr Gly Asn Ile Asn Ser Gln Asp Thr Cys Arg Gln
10               15                  20                  25

ggg cac cct ggc atc cct ggg aac ccc ggt cac aat ggt ctg cct gga       147
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                30                  35                  40

aga gat gga cga gac gga gcg aag ggt gac aaa ggc gat gca gga gaa       195
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
                45                  50                  55

cca gga cgt cct ggc agc ccg ggg aag gat ggg acg agt gga gag aag       243
Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            60                  65                  70

gga gaa cga gga gca gat gga aaa gtt gaa gca aaa ggc atc aaa ggt       291
Gly Glu Arg Gly Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys Gly
        75                  80                  85

gat caa ggc tca aga gga tcc cca gga aaa cat ggc ccc aag ggg ctt       339
Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly Leu
90                  95                  100                 105

gca ggg ccc atg gga gag aag ggc ctc cga gga gag act ggg cct cag       387
Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu Thr Gly Pro Gln
                110                 115                 120

ggg cag aag ggg aat aag ggt gac gtg ggt ccc act ggt cct gag ggg       435
Gly Gln Lys Gly Asn Lys Gly Asp Val Gly Pro Thr Gly Pro Glu Gly
                125                 130                 135

cca agg ggc aac att ggg cct ttg ggc cca act ggt tta ccg ggc ccc       483
Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly Pro
                140                 145                 150

atg ggc cct att gga aag cct ggt ccc aaa gga gaa gct gga ccc acg       531
Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr
        155                 160                 165

ggg ccc cag ggt gag cca gga gtc cag gga ata aga ggc tgg aaa gga       579
Gly Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys Gly
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158

	170			175				180				185				

```
gat cga gga gag aaa ggg aaa atc ggt gag act cta gtc ttg cca aaa      627
Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu Thr Leu Val Leu Pro Lys
                190                 195                 200

agt gct ttc act gtg ggg ctc acg gtg ctg agc aag ttt cct tct tca      675
Ser Ala Phe Thr Val Gly Leu Thr Val Leu Ser Lys Phe Pro Ser Ser
            205                 210                 215

gat agg ccc att aaa ttt gat aag atc cac atc act gtt ttc tcc aga      723
Asp Arg Pro Ile Lys Phe Asp Lys Ile His Ile Thr Val Phe Ser Arg
        220                 225                 230

aat gtt cag gtg tct ttg gtc aaa aat gga gta aaa ata ctg cac acc      771
Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys Ile Leu His Thr
        235                 240                 245

aaa gat gct tac atg agc tct gag gac cag gcc tct ggc ggc att gtc      819
Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile Val
250                 255                 260                 265

ctg cag ctg aag ctc ggg gat gag gtg tgg ctg cag gtg aca gga gga      867
Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln Val Thr Gly Gly
            270                 275                 280

gag agg ttc aat ggc ttg ttt gct gat gag gac gat gac aca act ttc      915
Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr Phe
            285                 290                 295

aca ggg ttc ctt ctg ttc agc agc ccg tga                              945
Thr Gly Phe Leu Leu Phe Ser Ser Pro
        300                 305
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<210> 272

<211> 306

<212> PRT

<213> Homo sapiens

<400> 272

```
Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn
1               5                   10                  15


Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly
                20                  25                  30


Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala
        35                  40                  45
```

159

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
    50   55   60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly
65   70   75   80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser
                85   90   95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
                100   105   110

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly
            115   120   125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro
    130   135   140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro
145   150   155   160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
                165   170   175

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
                180   185   190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu
            195   200   205

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp
    210   215   220

Lys Ile His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val
225   230   235   240

Lys Asn Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser
                245   250   255

Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp
            260   265   270

160

Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe
        275   280   285

Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
        290   295   300

Ser Pro
305

<210>   273

<211>   921

<212>   DNA

<213>   Homo sapiens

<400>   273
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gacacctgca ggcaagggca ccctggcatc cctgggaacc ccggtcacaa tggtctgcct   120

ggaagagatg gacgagacgg agcgaagggt gacaaaggcg atgcaggaga accaggacgt   180

cctggcagcc cggggaagga tgggacgagt ggagagaagg gagaacgagg agcagatgga   240

aaagttgaag caaaaggcat caaaggtgat caaggctcaa gaggatcccc aggaaaacat   300

ggccccaagg ggcttgcagg gcccatggga gagaagggcc tccgaggaga gactgggcct   360

caggggcaga gggggaataa gggtgacgtg ggtcccactg gtcctgaggg gccaaggggc   420

aacattgggc ctttgggccc aactggttta ccgggcccca tgggccctat tggaaagcct   480

ggtcccaaag agaagctgg acccacgggg ccccagggtg agccaggagt ccaggaata   540

agaggctgga aaggagatcg aggagagaaa gggaaaatcg gtgagactct agtcttgcca   600

aaaagtgctt tcactgtggg gctcacggtg ctgagcaagt ttccttcttc agataggccc   660

attaaatttg ataagatcca catcactgtt ttctccagaa atgttcaggt gtctttggtc   720

aaaaatggag taaaaatact gcacaccaaa gatgcttaca tgagctctga ggaccaggcc   780

tctggcggca ttgtcctgca gctgaagctc ggggatgagg tgtggctgca ggtgacagga   840

ggagagaggt tcaatggctt gtttgctgat gaggacgatg acacaacttt cacagggttc   900

cttctgttca gcagcccgtg a   921

161

<210> 274

<211> 287

<212> PRT

<213> Homo sapiens

<400> 274

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1   5   10   15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp
            20   25   30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp
            35   40   45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu
        50   55   60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys
65   70   75   80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg
                85   90   95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
            100   105   110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro
            115   120   125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys
    130   135   140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Gln Gly
145   150   155   160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu
                165   170   175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu

162

Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile His
        195   200   205

Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly
        210   215   220

Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln
225   230   235   240

Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp
                245   250   255

Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu
            260   265   270

Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro
        275   280   285

<210>   275

<211>   22

<212>   PRT

<213>   Homo sapiens

<400>   275

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln Val Thr
            20

<210>   276

<211>   20

<212>   PRT

<213>   Homo sapiens

<400> 276

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
1   5   10   15

Val Trp Leu Gln
            20

<210> 277

<211> 27

<212> PRT

<213> Homo sapiens

<400> 277

Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
1   5   10   15

Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro
            20   25

<210> 278

<211> 27

<212> PRT

<213> Homo sapiens

<400> 278

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
            20   25

<210> 279

<211> 29

<212> PRT

<213> Homo sapiens

164

<400> 279

Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
            20   25

<210> 280

<211> 29

<212> PRT

<213> Homo sapiens

<400> 280

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
1   5   10   15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
            20   25

<210> 281

<211> 29

<212> PRT

<213> Homo sapiens

<400> 281

Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
1   5   10   15

Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
            20   25

<210> 282

<211> 27

165

<212> PRT

<213> Homo sapiens

<400> 282

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
            20   25

<210> 283

<211> 27

<212> PRT

<213> Homo sapiens

<400> 283

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
1   5   10   15

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
            20   25

<210> 284

<211> 27

<212> PRT

<213> Homo sapiens

<400> 284

Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
1   5   10   15

Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys
            20   25

<210> 285

<211> 27

<212> PRT

<213> Homo sapiens

<400> 285

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
1   5   10   15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
            20   25

<210> 286

<211> 29

<212> PRT

<213> Homo sapiens

<400> 286

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
1   5   10   15

Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
            20   25

<210> 287

<211> 27

<212> PRT

<213> Homo sapiens

<400> 287

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
            20   25

<210> 288

<211> 29

<212> PRT

<213> Homo sapiens

<400> 288

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
            20   25

<210> 289

<211> 29

<212> PRT

<213> Homo sapiens

<400> 289

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
1   5   10   15

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
            20   25

<210> 290

<211> 29

<212> PRT

<213> Homo sapiens

<400> 290

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly/Ser Pro Gly
1   5   10   15

Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
          20   25

<210> 291

<211> 29

<212> PRT

<213> Homo sapiens

<400> 291

Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
1   5   10   15

Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
            20   25

<210> 292

<211> 11

<212> PRT

<213> Homo sapiens

<400> 292

Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
1   5   10

<210> 293

<211> 27

<212> PRT

<213> Homo sapiens

<400> 293

Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
1   5   10   15

169

Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg
            20   25

<210> 294

<211> 10

<212> PRT

<213> Homo sapiens

<400> 294

Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
1   5   10

<210> 295

<211> 27

<212> PRT

<213> Homo sapiens

<400> 295

Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            20   25

<210> 296

<211> 27

<212> PRT

<213> Homo sapiens

<400> 296

Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
1   5   10   15

Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys

170

<210> 297

<211> 27

<212> PRT

<213> Homo sapiens

<400> 297

Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
1   5   10   15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
            20   25

<210> 298

<211> 29

<212> PRT

<213> Homo sapiens

<400> 298

Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
1   5   10   15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
            20   25

<210> 299

<211> 245

<212> PRT

<213> Homo sapiens

<400> 299

Ala Ser Phe Leu Leu Gln Met Cys Pro Gly Pro Val Gln Ser Leu Ser
1   5   10   15

171

Ser Glu Pro Gly Ser Gly Gly Phe Cys Leu Pro Leu Lys Ser Ala Gln
        20   25   30

Gly Thr Thr Pro Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro
      35   40   45

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
     50   55   60

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser
65   70   75   80

Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp
            85   90   95

Gly Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Gly Ser
          100   105   110

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
          115   120   125

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly
     130   135   140

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro
145   150   155   160

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro
          165   170   175

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
          180   185   190

Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
          195   200   205

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu
    210   215   220

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Val Pro Ile Lys Phe Asp
225   230   235   240

Lys Ile His Ile Thr
                245

<210> 300

<211> 422

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(422)

<223> n = A, T, G, or C

<400> 300
ttgggannat ctgattacgt cccgcttggc accagggtga atgaagtcct atatagatca   60

caatttttta tattcaaatc tacgacattg aattagggct tctatatata tgatactttg   120

gtgtactgtg atcttgctgc ttttatccat atgtcagctt tggttcttgt gagtttacct   180

gcttattatg atacttggag tccattcata gtgtggggaa gaatgatttt tgccctgcag   240

gagaaggtct aattgaaata atgctgcttg tccccaaaga aattgtttgc cttgtactct   300

tgttaacctt agagctagac ctgggaatga ttcaacttca agccttaacc tggaattttc   360

tggatttgag ggaattccca agcctatgat cttttcaca ttttcttttt cttatatgaa   420

at   422

<210> 301

<211> 1848

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222>   (199)..(1215)

<223>

<400>   301
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aatatttgtc tgcctggtga gagcccagcg tagggctgtg ctgtccgtag atactcaata   120

ctgattaatg gatggccgtg catgtctgtg tgggagtcgt gtgcttagga tctgctcagc   180

tctccgaaag caacagaa atg gtg tgg gga aga aga aaa tca cag gat tgt   231
                    Met Val Trp Gly Arg Arg Lys Ser Gln Asp Cys
                     1   5   10

gat cca acc atg atc acg gct ttc tgg att gga ctt cat ctt ctg gag   279
Asp Pro Thr Met Ile Thr Ala Phe Trp Ile Gly Leu His Leu Leu Glu
             15   20   25

ggt cca caa ggt cca gtg ctg gca gca aac ctc acc att ttg tcc tcc   327
Gly Pro Gln Gly Pro Val Leu Ala Ala Asn Leu Thr Ile Leu Ser Ser
             30   35   40

aaa agg aag gtg act ttt aag aag caa tcc aga aga ggt ccc cgc cca   375
Lys Arg Lys Val Thr Phe Lys Lys Gln Ser Arg Arg Gly Pro Arg Pro
         45   50   55

acc ttc aaa att ctg tcc aaa agc aga caa gag gat cgc ccc gcg ctg   423
Thr Phe Lys Ile Leu Ser Lys Ser Arg Gln Glu Asp Arg Pro Ala Leu
60   65   70   75

agc cgg ctg gtg ggc agc agg agg cgc ctg atc gcc gcc ggg gcg ctg   471
Ser Arg Leu Val Gly Ser Arg Arg Arg Leu Ile Ala Ala Gly Ala Leu
                 80   85   90

ggg gtg gtg atg gtg ctg ctg ctg gtg atc ctc atc ccg gtg ctg atg   519
Gly Val Val Met Val Leu Leu Leu Val Ile Leu Ile Pro Val Leu Met
                 95   100   105

ctg ggc acc tgc cgc atg gtc tgc gac ccc tac ggg ggc acc aag gcg   567
Leu Gly Thr Cys Arg Met Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala
             110   115   120

ccc agc acc gct gcc acg ccc gac cgc ggc ctc atg cag tcc ctg ccc   615
Pro Ser Thr Ala Ala Thr Pro Asp Arg Gly Leu Met Gln Ser Leu Pro
         125   130   135

acc ttc atc cag ggc ccc aaa ggc gag gcc ggc agg ccc ggg aag gcg   663
Thr Phe Ile Gln Gly Pro Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala
140   145   150   155

ggt ccg cgc ggg ccc ccc gga gag ccc ggg cca ccc ggc ccc atg ggg   711
Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly
                 160   165   170

174

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ccc ccg ggc gag aag ggc gag ccg ggc cgc caa ggc ctg ccg ggc ccg      759
Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro
            175             180                 185

ccc ggg gcg ccc ggc ctg aac gcg gcc ggg gcc atc agc gcc gcc acc      807
Pro Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr
            190             195                 200

tac agc acg ggg ccc·aag atc gcc ttc tac gcc ggc ctc aag cgg cag      855
Tyr Ser Thr Gly Pro Lys Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln
            205             210                 215

cat gaa ggc tac gag gtg ctc aag ttc gac gac gtg gtc acc aac ctc      903
His Glu Gly Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu
220             225                 230                 235

gga aac cac tac gac ccc acc acc ggc aag ttc acc tgc tcc atc ccg      951
Gly Asn His Tyr Asp Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro
            240             245                 250

ggc atc tac ttc ttc acc tac cac gtc ctg atg cgc gga ggg gac ggc      999
Gly Ile Tyr Phe Phe Thr Tyr His Val Leu Met Arg Gly Gly Asp Gly
            255             260                 265

acc agc atg tgg gct gat ctc tgc aaa aac aac cag gtg cgt gct agt     1047
Thr Ser Met Trp Ala Asp Leu Cys Lys Asn Asn Gln Val Arg Ala Ser
            270             275                 280

gca att gcc caa gat gct gat cag aat tac gac tat gcc agt aac agt     1095
Ala Ile Ala Gln Asp Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser
            285             290                 295

gtg gtt ctt cat ttg gag ccg gga gat gaa gtc tat atc aaa tta gat     1143
Val Val Leu His Leu Glu Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp
300             305                 310                 315

ggc ggg aaa gcc cat gga gga aac aac aac aaa tac agc acg ttt tct     1191
Gly Gly Lys Ala His Gly Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser
            320             325                 330

gga ttt att att tat gct gac tga taatgcagaa actaagctta ttattctgag   1245
Gly Phe Ile Ile Tyr Ala Asp
            335

tttgaacact ggattcgtat ggctaacgtc agtgaatcaa ggatcccagg ggatgccaat   1305

ggcagggcac ctcagttgtg tatatgtggg gaaatcaaat gctacctgac tcacatctgt   1365

atcactcaga aacattatgt aaaaaatatc aaagcaagat aagcagatgt gtgatccact   1425

accgccaaag caaatactcc ttatcgttag tgtccatgtg aatgaagtcc tatatagatc   1485

acaaattttt atagacaaat ctaagacatt gaattatttc ttctatatat atgatacttt   1545

ggtgtactgt gatcttgctg cttttatcca tatgtcagct ttggttcttg tgagtttacc   1605

tgcttattat gatacttgga gtccattcat agtgtgggga agaatgattt ttgccctgca   1665
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175

ggagaaggtc taattgaaat aatgctgctt gtccccaaag aaattgtttg ccttgtactc   1725

ttgttaacct tagagctaga cctgggaatg attcaacttc aagccttaac ctggaatttt   1785

ctggatttga gggaattccc aagcctatga tcttttcac attttctttt tcttatatga   1845

aat   1848

<210> 302

<211> 338

<212> PRT

<213> Homo sapiens

<400> 302

Met Val Trp Gly Arg Arg Lys Ser Gln Asp Cys Asp Pro Thr Met Ile
1   5   10   15

Thr Ala Phe Trp Ile Gly Leu His Leu Leu Glu Gly Pro Gln Gly Pro
            20   25   30

Val Leu Ala Ala Asn Leu Thr Ile Leu Ser Ser Lys Arg Lys Val Thr
        35   40   45

Phe Lys Lys Gln Ser Arg Arg Gly Pro Arg Pro Thr Phe Lys Ile Leu
    50   55   60

Ser Lys Ser Arg Gln Glu Asp Arg Pro Ala Leu Ser Arg Leu Val Gly
65   70   75   80

Ser Arg Arg Arg Leu Ile Ala Ala Gly Ala Leu Gly Val Val Met Val
                85   90   95

Leu Leu Leu Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr Cys Arg
                100   105   110

Met Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala
        115   120   125

Thr Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly
    130   135   140

176

Pro Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro
145   150   155   160

Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys
                165   170   175

Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly
            180   185   190

Leu Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr Gly Pro
        195   200   205

Lys Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly Tyr Glu
    210   215   220

Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp
225   230   235   240

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe
            245   250   255

Thr Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala
            260   265   270

Asp Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala Gln Asp
        275   280   285

Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu
    290   295   300

Glu Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys Ala His
305   310   315   320

Gly Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr
            325   330   335

Ala Asp

<210>   303

<211>   1017

<212> DNA

<213> Homo sapiens

<400> 303
atggtgtggg gaagaagaaa atcacaggat tgtgatccaa ccatgatcac ggctttctgg   60

attggacttc atcttctgga gggtccacaa ggtccagtgc tggcagcaaa cctcaccatt   120

ttgtcctcca aaaggaaggt gacttttaag aagcaatcca gaagaggtcc ccgcccaacc   180

ttcaaaattc tgtccaaaag cagacaagag gatcgccccg cgctgagccg gctggtgggc   240

agcaggaggc gcctgatcgc cgccggggcg ctgggggtgg tgatggtgct gctgctggtg   300

atcctcatcc cggtgctgat gctgggcacc tgccgcatgg tctgcgaccc ctacgggggc   360

accaaggcgc ccagcaccgc tgccacgccc gaccgcggcc tcatgcagtc cctgcccacc   420

ttcatccagg gccccaaagg cgaggccggc aggcccggga aggcgggtcc gcgcgggccc   480

cccggagagc ccgggccacc cggccccatg gggcccccgg gcgagaaggg cgagccgggc   540

cgccaaggcc tgccgggccc gcccgggggcg cccggcctga cgcggccgg ggccatcagc   600

gccgccacct acagcacggg gcccaagatc gccttctacg ccggcctcaa gcggcagcat   660

gaaggctacg aggtgctcaa gttcgacgac gtggtcacca acctcggaaa ccactacgac   720

cccaccaccg gcaagttcac ctgctccatc ccgggcatct acttcttcac ctaccacgtc   780

ctgatgcgcg gaggggacgg caccagcatg tgggctgatc tctgcaaaaa caaccaggtg   840

cgtgctagtg caattgccca agatgctgat cagaattacg actatgccag taacagtgtg   900

gttcttcatt tggagccggg agatgaagtc tatatcaaat tagatggcgg gaaagcccat   960

ggaggaaaca acaacaaata cagcacgttt tctggatttt ttatttatgc tgactga   1017

<210> 304

<211> 36

<212> PRT

<213> Homo sapiens

<400> 304

Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp
1   5   10   15

178

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe
          20   25   30

Thr Tyr His Val
          35

<210> 305

<211> 20

<212> PRT

<213> Homo sapiens

<400> 305

Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His Val Leu
1   5   10   15

Met Arg Gly Gly
              20

<210> 306

<211> 22

<212> PRT

<213> Homo sapiens

<400> 306

Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu
1   5   10   15

Val Tyr Ile Lys Leu Asp
              20

<210> 307

<211> 27

<212> PRT

<213> Homo sapiens

179

<400> 307

Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly
1   5   10   15

Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
            20   25

<210> 308

<211> 20

<212> PRT

<213> Homo sapiens

<400> 308

Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu
1   5   10   15

Val Tyr Ile Lys
            20

<210> 309

<211> 27

<212> PRT

<213> Homo sapiens

<400> 309

Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly
1   5   10   15

Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro
            20   25

<210> 310

<211> 27

<212> PRT

<213> Homo sapiens

<400> 310

Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys
            20   25

<210> 311

<211> 27

<212> PRT

<213> Homo sapiens

<400> 311

Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
1   5   10   15

Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro
            20   25

<210> 312

<211> 29

<212> PRT

<213> Homo sapiens

<400> 312

Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu
            20   25

<210> 313

181

<211> 27

<212> PRT

<213> Homo sapiens

<400> 313

Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
1   5   10   15

Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro
            20   25

<210> 314

<211> 27

<212> PRT

<213> Homo sapiens

<400> 314

Gln His Glu Gly Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn
1   5   10   15

Leu Gly Asn His Tyr Asp Pro Thr Thr Gly Lys
            20   25

<210> 315

<211> 27

<212> PRT

<213> Homo sapiens

<400> 315

Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu Asn
            20   25

182

<210> 316

<211> 27

<212> PRT

<213> Homo sapiens

<400> 316

Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly
1   5   10   15

Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln
            20   25

<210> 317

<211> 29

<212> PRT

<213> Homo sapiens

<400> 317

Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
1   5   10   15

Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu
            20   25

<210> 318

<211> 29

<212> PRT

<213> Homo sapiens

<400> 318

Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
1   5   10   15

Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu
            20   25

<210> 319

<211> 44

<212> PRT

<213> Homo sapiens

<400> 319

Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Gly Pro Met Gly Pro
1   5   10   15

Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
            20   25   30

Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser
            35   40

<210> 320

<211> 27

<212> PRT

<213> Homo sapiens

<400> 320

Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
1   5   10   15

Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro
            20   25

<210> 321

<211> 29

<212> PRT

<213> Homo sapiens

184

<400> 321

Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly
1   5   10   15

Pro Pro Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile
            20   25

<210> 322

<211> 1528

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (161)..(895)

<223>

<400> 322
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caaaattctg tccaaaagca gacaagagga tcgccccgcg ctgagccggc tggtgggcag   120

caggaggcgc ctgatcgccg ccgggggcgct ggggggtggtg atg gtg ctg ctg ctg   175
                                              Met Val Leu Leu Leu
                                              1   5

gtg atc ctc atc ccg gtg ctg atg ctg ggc acc tgc cgc atg gtc tgc   223
Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr Cys Arg Met Val Cys
                10   15   20

gac ccc tac ggg ggc acc aag gcg ccc agc acc gct gcc acg ccc gac   271
Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala Thr Pro Asp
            25   30   35

cgc ggc ctc atg cag tcc ctg ccc acc ttc atc cag ggc ccc aaa ggc   319
Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly Pro Lys Gly
        40   45   50

gag gcc ggc agg ccc ggg aag gcg ggt ccg cgc ggg ccc ccc gga gag   367
Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu
    55   60   65

ccc ggg cca ccc ggc ccc atg ggg ccc ccg ggc gag aag ggc gag ccg   415

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          Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro
          70              75                  80                  85

ggc cgc caa ggc ctg ccg ggc ccg ccc ggg gcg ccc ggc ctg aac gcg          463
Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu Asn Ala
                90                  95                  100

gcc ggg gcc atc agc gcc gcc acc tac agc acg ggg ccc aag atc gcc          511
Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr Gly Pro Lys Ile Ala
                105                 110                 115

ttc tac gcc ggc ctc aag cgg cag cat gaa ggc tac gag gtg ctc aag          559
Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly Tyr Glu Val Leu Lys
                120                 125                 130

ttc gac gac gtg gtc acc aac ctc gga aac cac tac gac ccc acc acc          607
Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp Pro Thr Thr
        135                 140                 145

ggc aag ttc acc tgc tcc atc ccg ggc atc tac ttc ttc acc tac cac        ` 655
Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His
150                 155                 160                 165

gtc ctg atg cgc gga ggg gac ggc acc agc atg tgg gct gat ctc tgc          703
Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Cys
                170                 175                 180

aaa aac aac cag gtg cgt gct agt gca att gcc caa gat gct gat cag          751
Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala Asp Gln
                185                 190                 195

aat tac gac tat gcc agt aac agt gtg gtt ctt cat ttg gag ccg gga          799
Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly
        200                 205                 210

gat gaa gtc tat atc aaa tta gat ggc ggg aaa gcc cat gga gga aac          847
Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys Ala His Gly Gly Asn
    215                 220                 225

aac aac aaa tac agc acg ttt tct gga ttt att att tat gct gac tga          895
Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Ala Asp
230                 235                 240

taatgcagaa actaagctta ttattctgag tttgaacact ggattcgtat ggctaacgtc        955

agtgaatcaa ggatcccagg ggatgccaat ggcagggcac ctcagttgtg tatatgtggg       1015

gaaatcaaat gctacctgac tcacatctgt atcactcaga aacattatgt aaaaaatatc       1075

aaagcaagat aagcagatgt gtgatccact accgccaaag caaatactcc ttatcgttag       1135

tgtccatgtg aatgaagtcc tatatagatc acaaattttt atagacaaat ctaagacatt       1195

gaattatttc ttctatatat atgatacttt ggtgtactgt gatcttgctg cttttatcca       1255

tatgtcagct ttggttcttg tgagtttacc tgcttattat gatacttgga gtccattcat       1315
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186

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agtgtgggga agaatgattt ttgccctgca ggagaaggtc taattgaaat aatgctgctt      1375

gtccccaaag aaattgtttg ccttgtactc ttgttaacct tagagctaga cctgggaatg      1435

attcaacttc aagccttaac ctggaatttt ctggatttga gggaattccc aagcctatga      1495

tcttttcac attttcttt tcttatatga aat                                     1528
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<210> 323

<211> 244

<212> PRT

<213> Homo sapiens

<400> 323

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Met Val Leu Leu Leu Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr
1               5                   10                  15

Cys Arg Met Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr
            20                  25                  30

Ala Ala Thr Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile
            35                  40                  45

Gln Gly Pro Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg
        50                  55                  60

Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
65                  70                  75                  80

Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala
                85                  90                  95

Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr
            100                 105                 110

Gly Pro Lys Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly
            115                 120                 125

Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His
        130                 135                 140
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Tyr Asp Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr
145                 150                 155                 160

Phe Phe Thr Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met
                165                 170                 175

Trp Ala Asp Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala
            180                 185                 190

Gln Asp Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu
            195                 200                 205

His Leu Glu Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys
    210                 215                 220

Ala His Gly Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile
225                 230                 235                 240

Ile Tyr Ala Asp


<210>  324

<211>  735

<212>  DNA

<213>  Homo sapiens


<400>  324
atggtgctgc tgctggtgat cctcatcccg gtgctgatgc tgggcacctg ccgcatggtc      60

tgcgacccct acgggggcac caaggcgccc agcaccgctg ccacgcccga ccgcggcctc     120

atgcagtccc tgcccacctt catccagggc cccaaaggcg aggccggcag cccgggaag      180

gcgggtccgc gcgggccccc cggagagccc gggccacccg ccccatgggg ccccccgggc     240

gagaagggcg agccgggccg ccaaggcctg ccgggcccgc ccggggcgcc cggcctgaac     300

gcggccgggg ccatcagcgc cgccacctac agcacggggc ccaagatcgc cttctacgcc     360

ggcctcaagc ggcagcatga aggctacgag gtgctcaagt cgacgacgt ggtcaccaac      420

ctcggaaacc actacgaccc caccaccggc aagttcacct gctccatccc gggcatctac     480

ttcttcacct accacgtcct gatgcgcgga ggggacggca ccagcatgtg ggctgatctc     540
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188

tgcaaaaaca accaggtgcg tgctagtgca attgcccaag atgctgatca gaattacgac   600

tatgccagta acagtgtggt tcttcatttg gagccgggag atgaagtcta tatcaaatta.   660

gatggcggga aagcccatgg aggaaacaac aacaaataca gcacgttttc tggatttatt   720

atttatgctg actga   735

<210>   325

<211>   19

<212>   PRT

<213>   Homo sapiens

<400>   325

Met Val Leu Leu Leu Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr
1   5   10   15

Cys Arg Met

<210>   326

<211>   225

<212>   PRT

<213>   Homo sapiens

<400>   326

Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala Thr
1   5   10   15

Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly Pro
            20   25   30

Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro
        35   40   45

Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly
    50   55   60

189

Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu
65   70   75   80

Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr Gly Pro Lys
            85   90   95

Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly Tyr Glu Val
            100   105   110

Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp Pro
            115   120   125

Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr
        130   135   140

Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp
145   150   155   160

Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala
            165   170   175

Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu
            180   185   190

Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys Ala His Gly
        195   200   205

Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Ala
    210   215   220

Asp
225

<210> 327

<211> 36

<212> PRT

<213> Homo sapiens

<400> 327

Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp

190

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe
            20   25   30

Thr Tyr His Val
         35

<210> 328

<211> 20

<212> PRT

<213> Homo sapiens

<400> 328

Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His Val Leu
1   5   10   15

Met Arg Gly Gly
            20

<210> 329

<211> 22

<212> PRT

<213> Homo sapiens

<400> 329

Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu
1   5   10   15

Val Tyr Ile Lys Leu Asp
            20

<210> 330

<211> 27

<212> PRT

<213> Homo sapiens

<400> 330

Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly
1   5   10   15

Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
            20   25

<210> 331

<211> 20

<212> PRT

<213> Homo sapiens

<400> 331

Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu
1   5   10   15

Val Tyr Ile Lys
            20

<210> 332

<211> 27

<212> PRT

<213> Homo sapiens

<400> 332

Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly
1   5   10   15

Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro
            20   25

<210> 333

<211> 27

192

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<212>  PRT

<213>  Homo sapiens


<400>  333

Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1               5                   10                  15


Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys
            20                  25


<210>  334

<211>  27

<212>  PRT

<213>  Homo sapiens


<400>  334

Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
1               5                   10                  15


Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro
            20                  25


<210>  335

<211>  29

<212>  PRT

<213>  Homo sapiens


<400>  335

Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1               5                   10                  15


Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu
            20                  25
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193

<210> 336

<211> 27

<212> PRT

<213> Homo sapiens

<400> 336

Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
1   5   10   15

Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro
            20   25

<210> 337

<211> 27

<212> PRT

<213> Homo sapiens

<400> 337

Gln His Glu Gly Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn
1   5   10   15

Leu Gly Asn His Tyr Asp Pro Thr Thr Gly Lys
            20   25

<210> 338

<211> 27

<212> PRT

<213> Homo sapiens

<400> 338

Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly
1   5   10   15

Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu Asn

194

<210> 339

<211> 27

<212> PRT

<213> Homo sapiens

<400> 339

Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly
1   5   10   15

Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln
            20   25

<210> 340

<211> 29

<212> PRT

<213> Homo sapiens

<400> 340

Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
1   5   10   15

Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu
            20   25

<210> 341

<211> 29

<212> PRT

<213> Homo sapiens

<400> 341

Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
1   5   10   15

195

Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu
            20   25

<210>   342

<211>   44

<212>   PRT

<213>   Homo sapiens

<400>   342

Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro
1   5   10   15

Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
                20   25   30

Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser
            35   40

<210>   343

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   343

Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
1   5   10   15

Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro
                20   25

<210>   344

<211>   29

<212>   PRT

<213>   Homo sapiens

196

<400> 344

Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly
1   5   10   15

Pro Pro Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile
            20   25

<210> 345

<211> 452

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(452)

<223> n = A, T, G, or C

<400> 345
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ctcacccccg agagagacgc ctacgtggaa gcagtgctgt cggtctccaa cgccagcgtg   120

gcccagctgc ataccgctgg gtacaggaga gagttcctgg aataccaccg ccctccagga   180

gctttgcata cctgcggggg cccggggggca ttccacctca tcgtgcacct gaaggcggga   240

gatgcagtca acgtcgtggt gactgggggc aagctggctc acacagactt tgatgaaatg   300

tactccacat ttagtggggt tttcttatat cctttccttt cccacctcta aggtggctgg   360

ggagatgtca ggggaaagat agatagttgt aaaaactcta aagctttaat atattcggtt   420

tgtatgtaat ggaagcacgg ngctagagtt tc   452

<210> 346

<211> 3122

<212> DNA

<213> Homo sapiens

<400> 346

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ttccccagga gctgcggtgc cttctctggt gtctttttct gcggggctca cccagaagcc   120

tttccccagt gatggggggcg ttgtcctctt taacaaagtg ctggtgaacg acggggatgt   180

ttacaacccc agcaccgggg tcttcacggc tccttatgat gggcgctacc tgatcacggc   240

caccctcacc cccgagagag acgcctacgt ggaagcagtg ctgtcggtct ccaacgccag   300

cgtggcccag ctgcataccg ctgggtacag agagagttc ctggaataacc accgccctcc   360

aggagctttg catacctgcg ggggcccggg ggcattccac ctcatcgtgc acctgaaggc   420

gggagatgca gtcaacgtcg tggtgactgg gggcaagctg gctcacacag actttgatga   480

aatgtactcc acatttagtg gggttttctt atatcctttc ctttcccacc tctaaggtgg   540

ctggggagat gtcaggggaa agatagatag ttgtaaaaac tctaaagctt taatatattc   600

ggtttgtatg taatggaagc acggggctag agtttccaca taggccccaa cataaaggcc   660

ttccctcgct gttgaggcca ccatgcctta ctgcatccag ccaggctgca gggagtgagg   720

cacacggtga acatggccac tgacttttct gccactctaa ctggacaact ggaagacttg   780

gaaaggcctc cacctgtatc tacactctga gggccctgga ctgggcctga gcttgccaca   840

gaggctccgt ctgactgtgg gctgggagga gggaggcagg ggagagccgg tcacggtggc   900

tggtctttac tgcagggcag cactgtggcc agctgtctgt ctttacactg catgcagaag   960

tttaaacact gaagtgccga agtggcccgt gccgccgcac agagacccccg actttagttt   1020

gggctgttcc acgcttggct caccattgcc gcctgggact taacctgctc aggcgggcct   1080

tcgcccagct gcaaataggg atgcgttaga gactgttccc aaagcttgtt gggctcctta   1140

aatggcatgt acaatttaag tgcaaagaca gggagtgtca ataaagatgg aaagccattt   1200

ccagttaact tttgttaatt taagtgtggt cccttacaga tcgggagttg ttgctaaaaa   1260

gcaaactgaa gaaatgtttt gtttcaaaaa gggctacaga aagtaacctt gagtaaaatt   1320

aatctcagct acaaaactgt taccccctccg catccaagct atacacttgg gttttgtttc   1380

tggcttgtga agacggacca gatgtgcacg gaggtcacgg ccccatgtca tctgcagctg   1440

gagcggctcc tctggggatg ctgcactcag atcccacagc agctgcccag gctaacttga   1500

tccctgctgc ttcactgcac caatctccag cagacacagc tcgccgagct cttgggtttc   1560

198

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taagcagcag gaagctcaac ctaacgctgg ccacacgctg acagctgagc ccatctgaga    1620

acacggcatc ttcacacagc gagacgcctc cactgagggg aggcccggga gtatcaatct    1680

gtcaccagtg gccacggaga cctctcagca cccttagttc aaggtagtct ctgtggatca    1740

ggttggtaac acctactggt taatcaagtc ccactgggga aaggtttgga cggtagaatc    1800

aagagctgca gtttccttgg cccacaagat gctcttatgc tgtaaaaaaa atgctttaag    1860

aattgtttgc aaatgaattt acagggtggc cactggacac ttcagagttc ctatttactc    1920

cccccgccac agctaggaag accagcaaga actaaaggtt tgccgtttta ctatttaaaa    1980

tgtggacctc tttgtccagg agcgggaggg agaatggcat ctcaccccat tacaacagct    2040

ggggaactgg ctaaagagag ctgtcagaga gtatccttgg ctgtcctagg aatgactcat    2100

ggaaagcgcc ccagtgcagc agtgttttca ggaaaaccca gtgggcacgc gccatcgccc    2160

tctcctctcc tctcacgctc cttttgaaaa gaccgcactc ggcgcccaag gggacgtgct    2220

caagagctgc aggggcaggg cccaggcaaa aggtgggtga tgactacctg ctgctttccc    2280

tactccgtag atgggtctgg aacatcgggt aaaacccagt cctcctctca gtgcatctct    2340

actcaccaac aatggtgaat ctcagctctg tgtattcaag acaggcaaaa cagaatatgc    2400

ctcattatgg ctggagcgtg cctctacttt gagataaagc tggatgacag gtggatcctg    2460

gcccacttag gagacatctt tagaaaggga aaggctgtct ttttgtacag gtagtagaac    2520

aacaaggtca gctgagctta aggctgtggg gttcgaagca gcccttcaag aagtcatcac    2580

ccctgaagta gtgcctgcga gtcagtcaga ggcataccaa accctgagac agaatcaggc    2640

acaagttcac aacttttttt ttttttgggg gggagacagt cctactctgt cgcccaggct    2700

ggagtgcagt agcgcgatct cagctcactg caacctccgc ctcccgggtt caagcaattc    2760

tcctacctca gcctcccgag tagcggggac tacaggtgca tgccgccacg cccggttaat    2820

tttttgtatt ttagtagaga tggggtttca ccgtgttgcc caggctggtc gcgaactcct    2880

gagctcagcc aatccgccca cctcggcctc ccaaagtgct gggattacag gtatgagcca    2940

ccatgcccag ccaagttcac aacttctgat atcaagttgt tgctgagaaa aggtcaggac    3000

acttcttaag tagagaagga ctgtgacatc ccctccaaac ctccatgtaa cactaacaaa    3060

tggcctcatt tacacgatta aaaacaaaat ggtatcgtca ataaatgcaa accttaaact    3120

gc                                                                   3122


<210>  347
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<211> 2216

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1542)

<223>

<400> 347
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atg gag ggg gat gcc cag ctg gca gtg gag ggt gtg agc att ggg cct        48
Met Glu Gly Asp Ala Gln Leu Ala Val Glu Gly Val Ser Ile Gly Pro
1               5                   10                  15

ggg acc gca gtt cct cct gct cca cag gtt ctg agg acg tgg aga ttt        96
Gly Thr Ala Val Pro Pro Ala Pro Gln Val Leu Arg Thr Trp Arg Phe
                20                  25                  30

ggc act gag cgg gga tct gtg tgc tcc tct gtt gag ggg gag acc aac       144
Gly Thr Glu Arg Gly Ser Val Cys Ser Ser Val Glu Gly Glu Thr Asn
            35                  40                  45

tgt ttc ttc gaa aaa gcc cct tta tct aag ctc acc ccg ggc cca ttt       192
Cys Phe Phe Glu Lys Ala Pro Leu Ser Lys Leu Thr Pro Gly Pro Phe
    50                  55                  60

agc acc aca agc gac agt ttc tct gaa ttt tct gat gag tcc agc att       240
Ser Thr Thr Ser Asp Ser Phe Ser Glu Phe Ser Asp Glu Ser Ser Ile
65                  70                  75                  80

tct cat gct tca gtc cgt gat ggg agt ttt aaa aca aaa cta gac ggc       288
Ser His Ala Ser Val Arg Asp Gly Ser Phe Lys Thr Lys Leu Asp Gly
                85                  90                  95

agg tcg gga ggc agc cgc cga ttt ttg tcg ggt cct aaa caa aaa tca       336
Arg Ser Gly Gly Ser Arg Arg Phe Leu Ser Gly Pro Lys Gln Lys Ser
                100                 105                 110

aat gtg ttg cgc ttt gga act ctg ggc atc gtg ggc acc agg ctg acg       384
Asn Val Leu Arg Phe Gly Thr Leu Gly Ile Val Gly Thr Arg Leu Thr
            115                 120                 125

ggg gcg gcg ggg atg gcg ttt ctt ggc gag cgg gtc cct cag cca ggc       432
Gly Ala Ala Gly Met Ala Phe Leu Gly Glu Arg Val Pro Gln Pro Gly
    130                 135                 140

ccg ggt att gtc agg cgt ccc gtg gac ggt cgg gag ggg ctt cct gga       480
Pro Gly Ile Val Arg Arg Pro Val Asp Gly Arg Glu Gly Leu Pro Gly
```

200

```
ggg ctc gtt ccg gga acg agt tca aag gag gaa agg gcg gca gct tcc    528
Gly Leu Val Pro Gly Thr Ser Ser Lys Glu Glu Arg Ala Ala Ala Ser
            165                 170                 175

ggc gcc ttc ccc aga ggg ccg gga gac gca cgc cag gag ctt cct ccg    576
Gly Ala Phe Pro Arg Gly Pro Gly Asp Ala Arg Gln Glu Leu Pro Pro
            180                 185                 190

ttg gaa gtc cct tcc gct ggc gac gtg ggc gct gtg gcc gcg gcc ctc    624
Leu Glu Val Pro Ser Ala Gly Asp Val Gly Ala Val Ala Ala Ala Leu
            195                 200                 205

gtg gag cct gag ccc tcc tca cgg cct ccg cgc agc cct ggg gcc ccc    672
Val Glu Pro Glu Pro Ser Ser Arg Pro Pro Arg Ser Pro Gly Ala Pro
    210                 215                 220

cgg cag ggt ccc tcg gca gcc cgc ggg aga ggc cgt ggg gcc ccg gca    720
Arg Gln Gly Pro Ser Ala Ala Arg Gly Arg Gly Arg Gly Ala Pro Ala
225                 230                 235                 240

gga gtg tgg ttc aga gac gag gcg ccc tcg ccc ccg ccg ccc gca gag    768
Gly Val Trp Phe Arg Asp Glu Ala Pro Ser Pro Pro Pro Pro Ala Glu
            245                 250                 255

gcc ccg aag gag ccg ctg cag ccc gag ccc gcc ccg ccg agg ccc agc    816
Ala Pro Lys Glu Pro Leu Gln Pro Glu Pro Ala Pro Pro Arg Pro Ser
            260                 265                 270

ggc ccc gca acc gca gag gac cct ggg cga cgg ccc gtc ctg ccc cag    864
Gly Pro Ala Thr Ala Glu Asp Pro Gly Arg Arg Pro Val Leu Pro Gln
            275                 280                 285

cgg ccc ccc gag gag agg ccg ccc cag ccg cca ggc tcc acc ggg gtc    912
Arg Pro Pro Glu Glu Arg Pro Pro Gln Pro Pro Gly Ser Thr Gly Val
    290                 295                 300

atc gcg gag acg ggc cag gcc ggg ccc ccc gca ggc gca ggc gtg tct    960
Ile Ala Glu Thr Gly Gln Ala Gly Pro Pro Ala Gly Ala Gly Val Ser
305                 310                 315                 320

ggg cgg ggt ctg ccg cgg ggc gtg gac ggc cag acc ggg agc ggc acc    1008
Gly Arg Gly Leu Pro Arg Gly Val Asp Gly Gln Thr Gly Ser Gly Thr
            325                 330                 335

gtc ccc ggc gca gaa ggc ttc gcg ggc gca cca gga tac ccg aag tca    1056
Val Pro Gly Ala Glu Gly Phe Ala Gly Ala Pro Gly Tyr Pro Lys Ser
            340                 345                 350

cct cct gta gct tcc cca gga gct ccg gtg cct tct ctg gtg tct ttt    1104
Pro Pro Val Ala Ser Pro Gly Ala Pro Val Pro Ser Leu Val Ser Phe
            355                 360                 365

tct gcg ggg ctc acc cag aag cct ttc ccc agt gat ggg ggc gtt gtc    1152
Ser Ala Gly Leu Thr Gln Lys Pro Phe Pro Ser Asp Gly Gly Val Val
    370                 375                 380
```

```
ctc ttt aac aaa gtg ctg gtg aac gac ggg gat gtt tac aac ccc agc     1200
Leu Phe Asn Lys Val Leu Val Asn Asp Gly Asp Val Tyr Asn Pro Ser
385             390             395                 400

acc ggg gtc ttc acg gct cct tat gat ggg cgc tac ctg atc acg gcc     1248
Thr Gly Val Phe Thr Ala Pro Tyr Asp Gly Arg Tyr Leu Ile Thr Ala
                405             410             415

acc ctc acc ccc gag aga gac gcc tac gtg gaa gca gtg ctg tcg gtc     1296
Thr Leu Thr Pro Glu Arg Asp Ala Tyr Val Glu Ala Val Leu Ser Val
            420             425             430

tcc aac gcc agc gtg gcc cag ctg cat acc gct ggg tac agg aga gag     1344
Ser Asn Ala Ser Val Ala Gln Leu His Thr Ala Gly Tyr Arg Arg Glu
            435             440             445

ttc ctg gaa tac cac cgc cct aca gga gct ttg cat acc tgc ggg ggc     1392
Phe Leu Glu Tyr His Arg Pro Thr Gly Ala Leu His Thr Cys Gly Gly
        450             455             460

ccg ggg gca ttc cac ctc atc gtg cac ctg aag gcg gga gat gca gtc     1440
Pro Gly Ala Phe His Leu Ile Val His Leu Lys Ala Gly Asp Ala Val
465             470             475             480

aac gtc gtg gtg act ggg ggc aag ctg gct cac aca gac ttt gat gaa     1488
Asn Val Val Val Thr Gly Gly Lys Leu Ala His Thr Asp Phe Asp Glu
                485             490             495

atg tac tcc aca ttt agt ggg gtt ttc tta tat cct ttc ctt tcc cac     1536
Met Tyr Ser Thr Phe Ser Gly Val Phe Leu Tyr Pro Phe Leu Ser His
                500             505             510

ctc taa ggtggctggg gagatgtcag gggaaagata datagttgta aaaactctaa     1592
Leu


agctttaata tattcggttt gtatgtaatg gaagcacggg gctagagttt ccacataggc     1652

cccaacataa aggccttccc tcgctgttga ggccaccatg ccttactgca tccagccagg     1712

ctgcagggag tgaggcacac ggtgaacatg gccactgact tttctgccac tctaactgga     1772

caactggaag acttggaaag gcctccacct gtatctacac tctgagggcc ctggactggg     1832

cctgagcttg ccacagaggc tccgtctgac tgtgggctgg gaggagggag gcaggggaga     1892

gccggtcacg gtggctggtc tttactgcag ggcagcactg tggccagctg tctgtcttta     1952

cactgcatgc agaagtttaa acactgaagt gccgaagtgg cccgtgccgc cgcacagaga     2012

ccccgacttt agtttgggct gttgcacgct tggctcacca ttgccacctg ggacttaacc     2072

tgctcaggcg ggccttcgcc cagctgcaaa tagggatgcg ttagagactg ttcccaaagc     2132

ttgttgggct ccttaaatgg catgtacaat ttaagtgcaa agacagggag tgtcaataaa     2192
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202

gatggaaagc caaaaaaaaa aaaa   2216

<210> 348

<211> 513

<212> PRT

<213> Homo sapiens

<400> 348

Met Glu Gly Asp Ala Gln Leu Ala Val Glu Gly Val Ser Ile Gly Pro
1   5   10   15

Gly Thr Ala Val Pro Pro Ala Pro Gln Val Leu Arg Thr Trp Arg Phe
                20   25   30

Gly Thr Glu Arg Gly Ser Val Cys Ser Ser Val Glu Gly Glu Thr Asn
            35   40   45

Cys Phe Phe Glu Lys Ala Pro Leu Ser Lys Leu Thr Pro Gly Pro Phe
        50   55   60

Ser Thr Thr Ser Asp Ser Phe Ser Glu Phe Ser Asp Glu Ser Ser Ile
65   70   75   80

Ser His Ala Ser Val Arg Asp Gly Ser Phe Lys Thr Lys Leu Asp Gly
                85   90   95

Arg Ser Gly Gly Ser Arg Arg Phe Leu Ser Gly Pro Lys Gln Lys Ser
            100   105   110

Asn Val Leu Arg Phe Gly Thr Leu Gly Ile Val Gly Thr Arg Leu Thr
            115   120   125

Gly Ala Ala Gly Met Ala Phe Leu Gly Glu Arg Val Pro Gln Pro Gly
    130   135   140

Pro Gly Ile Val Arg Arg Pro Val Asp Gly Arg Glu Gly Leu Pro Gly
145   150   155   160

Gly Leu Val Pro Gly Thr Ser Ser Lys Glu Glu Arg Ala Ala Ala Ser
                165   170   175

203

```
Gly Ala Phe Pro Arg Gly Pro Gly Asp Ala Arg Gln Glu Leu Pro Pro
            180                 185                 190

Leu Glu Val Pro Ser Ala Gly Asp Val Gly Ala Val Ala Ala Ala Leu
            195                 200                 205

Val Glu Pro Glu Pro Ser Ser Arg Pro Pro Arg Ser Pro Gly Ala Pro
        210                 215                 220

Arg Gln Gly Pro Ser Ala Ala Arg Gly Arg Gly Arg Gly Ala Pro Ala
225                 230                 235                 240

Gly Val Trp Phe Arg Asp Glu Ala Pro Ser Pro Pro Pro Pro Ala Glu
                245                 250                 255

Ala Pro Lys Glu Pro Leu Gln Pro Glu Pro Ala Pro Pro Arg Pro Ser
            260                 265                 270

Gly Pro Ala Thr Ala Glu Asp Pro Gly Arg Arg Pro Val Leu Pro Gln
            275                 280                 285

Arg Pro Pro Glu Glu Arg Pro Pro Gln Pro Pro Gly Ser Thr Gly Val
        290                 295                 300

Ile Ala Glu Thr Gly Gln Ala Gly Pro Pro Ala Gly Ala Gly Val Ser
305                 310                 315                 320

Gly Arg Gly Leu Pro Arg Gly Val Asp Gly Gln Thr Gly Ser Gly Thr
                325                 330                 335

Val Pro Gly Ala Glu Gly Phe Ala Gly Ala Pro Gly Tyr Pro Lys Ser
            340                 345                 350

Pro Pro Val Ala Ser Pro Gly Ala Pro Val Pro Ser Leu Val Ser Phe
            355                 360                 365

Ser Ala Gly Leu Thr Gln Lys Pro Phe Pro Ser Asp Gly Gly Val Val
        370                 375                 380

Leu Phe Asn Lys Val Leu Val Asn Asp Gly Asp Val Tyr Asn Pro Ser
385                 390                 395                 400
```

204

```
Thr Gly Val Phe Thr Ala Pro Tyr Asp Gly Arg Tyr Leu Ile Thr Ala
                405                 410                 415


Thr Leu Thr Pro Glu Arg Asp Ala Tyr Val Glu Ala Val Leu Ser Val
                420                 425                 430


Ser Asn Ala Ser Val Ala Gln Leu His Thr Ala Gly Tyr Arg Arg Glu
            435                 440                 445


Phe Leu Glu Tyr His Arg Pro Thr Gly Ala Leu His Thr Cys Gly Gly
        450                 455                 460


Pro Gly Ala Phe His Leu Ile Val His Leu Lys Ala Gly Asp Ala Val
465                 470                 475                 480


Asn Val Val Val Thr Gly Gly Lys Leu Ala His Thr Asp Phe Asp Glu
                485                 490                 495


Met Tyr Ser Thr Phe Ser Gly Val Phe Leu Tyr Pro Phe Leu Ser His
                500                 505                 510


Leu


<210> 349

<211> 1542

<212> DNA

<213> Homo sapiens


<400> 349
atggagggggg atgcccagct ggcagtggag ggtgtgagca ttgggcctgg gaccgcagtt     60

cctcctgctc cacaggttct gaggacgtgg agatttggca ctgagcgggg atctgtgtgc    120

tcctctgttg aggggggagac caactgtttc ttcgaaaaag ccccttttatc taagctcacc    180

ccgggcccat ttagcaccac aagcgacagt ttctctgaat tttctgatga gtccagcatt    240

tctcatgctt cagtccgtga tgggagtttt aaaacaaaac tagacggcag gtcgggaggc    300

agccgccgat ttttgtcggg tcctaaacaa aaatcaaatg tgttgcgctt tggaactctg    360

ggcatcgtgg gcaccaggct gacgggggcg gcggggatgg cgtttcttgg cgagcgggtc    420
```

```
        cctcagccag gcccgggtat tgtcaggcgt cccgtggacg gtcgggaggg gcttcctgga    480

        gggctcgttc cgggaacgag ttcaaaggag gaaagggcgg cagcttccgg cgccttcccc    540

        agagggccgg gagacgcacg ccaggagctt cctccgttgg aagtcccttc cgctggcgac    600

        gtgggcgctg tggccgcggc cctcgtggag cctgagccct cctcacggcc tccgcgcagc    660

        cctgggggcc cccggcaggg tccctcggca gcccgcggga gaggccgtgg ggccccggca    720

        ggagtgtggt tcagagacga ggcgccctcg cccccgccgc ccgcagaggc cccgaaggag    780

        ccgctgcagc ccgagcccgc cccgccgagg cccagcggcc ccgcaaccgc agaggaccct    840

        gggcgacggc ccgtcctgcc ccagcggccc cccgaggaga ggccgcccca gccgccaggc    900

        tccaccgggg tcatcgcgga cacgggccag gccgggcccc ccgcaggcgc aggcgtgtct    960

        gggcggggtc tgccgcgggg cgtggacggc cagaccggga gcggcaccgt ccccggcgca   1020

        gaaggcttcg cgggcgcacc aggatacccg aagtcacctc ctgtagcttc cccaggagct   1080

        ccggtgcctt ctctggtgtc tttttctgcg gggctcaccc agaagccttt ccccagtgat   1140

        gggggcgttg tcctctttaa caaagtgctg gtgaacgacg gggatgttta caaccccagc   1200

        accggggtct tcacggctcc ttatgatggg cgctacctga tcacggccac cctcaccccc   1260

        gagagagacg cctacgtgga agcagtgctg tcggtctcca cgccagcgt ggcccagctg   1320

        cataccgctg ggtacaggag agagttcctg gaataccacc gccctacagg agctttgcat   1380

        acctgcgggg gcccgggggc attccacctc atcgtgcacc tgaaggcggg agatgcagtc   1440

        aacgtcgtgg tgactggggg caagctggct cacacagact ttgatgaaat. gtactccaca   1500

        tttagtgggg ttttcttata tcctttcctt tcccacctct aa                      1542


<210>  350

<211>  36

<212>  PRT

<213>  Homo sapiens


<400>  350

Val Val Leu Phe Asn Lys Val Leu Val Asn Asp Gly Asp Val Tyr Asn
1               5                   10                  15

Pro Ser Thr Gly Val Phe Thr Ala Pro Tyr Asp Gly Arg Tyr Leu Ile
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206

Thr Ala Thr Leu
        35

<210> 351

<211> 27

<212> PRT

<213> Homo sapiens

<400> 351

Phe Pro Ser Asp Gly Gly Val Val Leu Phe Asn Lys Val Leu Val Asn
1   5   10   15

Asp Gly Asp Val Tyr Asn Pro Ser Thr Gly Val
                20   25

<210> 352

<211> 171

<212> PRT

<213> Homo sapiens

<400> 352

Glu Thr Ser Leu Glu Arg Glu Arg Leu Ser Phe Cys Thr Gly Ser Arg
1   5   10   15

Thr Thr Arg Ser Ala Glu Leu Lys Ala Val Gly Phe Glu Ala Ala Leu
                20   25   30

Gln Glu Val Ile Thr Pro Glu Val Val Pro Ala Ser Gln Ser Glu Ala
        35   40   45

Tyr Gln Thr Leu Arg Gln Asn Gln Ala Gln Val His Asn Phe Phe Phe
    50   55   60

Phe Trp Gly Gly Asp Ser Pro Thr Leu Ser Pro Arg Leu Glu Cys Ser
65   70   75   80

Ser Ala Ile Ser Ala His Cys Asn Leu Arg Leu Pro Gly Ser Ser Asn
            85   90   95

Ser Pro Thr Ser Ala Ser Arg Val Ala Gly Thr Thr Gly Ala Cys Arg
            100   105   110

His Ala Arg Leu Ile Phe Cys Ile Leu Val Glu Met Gly Phe His Arg
            115   120   125

Val Ala Gln Ala Gly Arg Glu Leu Leu Ser Ser Ala Asn Pro Pro Thr
    130   135   140

Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser His His Ala Gln
145   150   155   160

Pro Ser Ser Gln Leu Leu Ile Ser Ser Cys Cys
            165   170

<210> 353

<211> 418

<212> DNA

<213> Homo sapiens

<400> 353
gaattcttcg tcgacgattc cgtgtccact gggaggaggg agcaggccgg acgtctgccc   60

cgtccccggt gggtgcgggg gcgtcaggtg ggcaaaaccc cagcgagggg aagctccagg   120

atcgttgcag tgccatttct aggtccctcc tcctctcccc acttcccttt tctctgcacc   180

catttgacag gagcctctgc aatcatctgc ttattgcgcg tcaccgtcat ccagtgggag   240

agccttgtgg taccaccttt ctccacctat ggctgcggcc cgcaggaaga tgacgggttg   300

ctcttctgct ctggagccat ccctgttgcc ggtaactgca acccgcaaga tgatgccaga   360

gctcagcttc cctctttta tgttgcaaag tatatgctgc cctgcactga gcagaccc   418

<210> 354

<211> 1613

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (683)..(1564)

<223>

<400> 354
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aggaaggtta gggaggcgga gagggaccgc gcccgcagag agaggcgcgg gccagggcta      60

ctagcaggga ctggggccgc ggcaggggta gcaaggtgag tcggtgcttg ccaagaggca     120

gagcgcaaaa cctactagga gatcgcgccc ggtgagcagc acccgcagct cagagcccgg     180

gacgtccgga gcgcggggag cagtcccctc tccatcaggg agtggtctat ctgggcagtc     240

tgggacccag gcaccgcgcc atccctgaga gagcagcagt ctggagagca ggcatctcag     300

atccctaaga aaccagccgt ccgagaagcc gcggatctca ggtgcccagg atcgttagga     360

ctgaacggga gggtactaga ggaccactgg ctctggaccg tcgggagctg cccctgacgt     420

aacccacgag gggcctcccc ttgacggacg gcttggggag cggcaccgcc ggcctggagc     480

ccgcagaggc agggtaaggg gagcgggggg cagccgtcgg gggagtgcag acccaggccc     540

aaggcgggtc accgctcctg gcccgcggag agccccggcc ccggcagcca ttgcgcccaa     600

gagtgaggaa gatttgctgg ccctggcagc gtcgcggctg agccggcgca agagggtggc     660
```

```
gggcgcggcc gtcggagtgg cc atg gtg ctg ctg ctg ctg gtg gcc atc ccg      712
                         Met Val Leu Leu Leu Leu Val Ala Ile Pro
                          1               5                   10

ctg ctg gtg cac agc tcc cgc ggg cca gcg cac tac gag atg ctg ggt      760
Leu Leu Val His Ser Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly
             15                  20                  25

cgc tgc cgc atg gtg tgc gac ccg cat ggg ccc cgt ggc cct ggt ccc      808
Arg Cys Arg Met Val Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro
         30                  35                  40

gac ggc gcg cct gct tcc gtg ccc ccc ttc ccg cca ggc gcc aag gga      856
Asp Gly Ala Pro Ala Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly
         45                  50                  55      |

gag gtg ggc cgg cgc ggg aaa gca ggc ctg cgg ggg ccc cct ggа cca      904
Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro
    60                  65                  70
```

209

```
cca ggt cca aga ggg ccc cca gga gaa ccc ggc agg cca ggc ccc ccg    952
Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
75              80              85              90

ggc cct ccc ggt cca ggt ccg ggc ggg gtg gcg ccc gct gcc ggc tac    1000
Gly Pro Pro Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr
            95              100             105

gtg cct cgc att gct ttc tac gcg ggc ctg cgg cgg ccc cac gag ggt    1048
Val Pro Arg Ile Ala Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly
        110             115             120

tac gag gtg ctg cgc ttc gac gac gtg gtg acc aac gtg ggc aac gcc    1096
Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala
        125             130             135

tac gag gca gcc agc ggc aag ttt act tgc ccc atg cca ggc gtc tac    1144
Tyr Glu Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr
        140             145             150

ttc ttc gct tac cac gtg ctc atg cgc ggc ggc gac ggc acc agc atg    1192
Phe Phe Ala Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met
155             160             165             170

tgg gcc gac ctc atg aag aac gga cag ggc tgg ggg cct aga acg gcc    1240
Trp Ala Asp Leu Met Lys Asn Gly Gln Gly Trp Gly Pro Arg Thr Ala
            175             180             185

ttg ccc tca gca gag tct gtg gct tgg cag ctc aag ggc cag cca gga    1288
Leu Pro Ser Ala Glu Ser Val Ala Trp Gln Leu Lys Gly Gln Pro Gly
            190             195             200

gcc tct gca atc atc tgc tta ttg cgc gtc acc gtc atc cag tgg gag    1336
Ala Ser Ala Ile Ile Cys Leu Leu Arg Val Thr Val Ile Gln Trp Glu
        205             210             215

agc ctt gtg gta cca cct ttc tcc acc tat ggc tgc ggc ccg cag gaa    1384
Ser Leu Val Val Pro Pro Phe Ser Thr Tyr Gly Cys Gly Pro Gln Glu
        220             225             230

gat gac ggg ttg cgc ttc tgc tct gga gcc agc cct gtt gcc ggg aac    1432
Asp Asp Gly Leu Arg Phe Cys Ser Gly Ala Ser Pro Val Ala Gly Asn
235             240             245             250

tgc aac ccg caa gat gat gcc aga gct cag ctt ccc tct ttt tat gtt    1480
Cys Asn Pro Gln Asp Asp Ala Arg Ala Gln Leu Pro Ser Phe Tyr Val
            255             260             265

gca gag ttt atg ctg ccc tgc act gag cag acg ctt tcg ctt acg cag    1528
Ala Glu Phe Met Leu Pro Cys Thr Glu Gln Thr Leu Ser Leu Thr Gln
            270             275             280

ccc tgc cct tca cct tgc cca gtg att ccg gaa taa ccttccggac         1574
Pro Cys Pro Ser Pro Cys Pro Val Ile Pro Glu
            285             290
```

210

<210> 355

<211> 293

<212> PRT

<213> Homo sapiens

<400> 355

Met Val Leu Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser Ser
1   5   10   15

Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val Cys
            20   25   30

Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala Ser
            35   40   45

Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly
        50   55   60

Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro
65   70   75   80

Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly
                85   90   95

Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala Phe
                100   105   110

Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg Phe
            115   120   125

Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly
        130   135   140

Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val
145   150   155   160

Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met Lys
                165   170   175

211

```
Asn Gly Gln Gly Trp Gly Pro Arg Thr Ala Leu Pro Ser Ala Glu Ser
            180                     185                 190

Val Ala Trp Gln Leu Lys Gly Gln Pro Gly Ala Ser Ala Ile Ile Cys
            195                 200                 205

Leu Leu Arg Val Thr Val Ile Gln Trp Glu Ser Leu Val Val Pro Pro
    210                     215                 220

Phe Ser Thr Tyr Gly Cys Gly Pro Gln Glu Asp Asp Gly Leu Arg Phe
225                     230                 235                 240

Cys Ser Gly Ala Ser Pro Val Ala Gly Asn Cys Asn Pro Gln Asp Asp
                245                 250                 255

Ala Arg Ala Gln Leu Pro Ser Phe Tyr Val Ala Glu Phe Met Leu Pro
            260                 265                 270

Cys Thr Glu Gln Thr Leu Ser Leu Thr Gln Pro Cys Pro Ser Pro Cys
            275                 280                 285

Pro Val Ile Pro Glu
    290
```

<210> 356

<211> 882

<212> DNA

<213> Homo sapiens

<400> 356
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atggtgctgc tgctgctggt ggccatcccg ctgctggtgc acagctcccg cgggccagcg      60

cactacgaga tgctgggtcg ctgccgcatg gtgtgcgacc cgcatgggcc ccgtggccct     120

ggtcccgacg gcgcgcctgc ttccgtgccc cccttcccgc caggcgccaa gggagaggtg     180

ggccggcgcg ggaaagcagg cctgcggggg ccccctggac caccaggtcc aagagggccc     240

ccaggagaac ccggcaggcc aggccccccg ggccctcccg tccaggtcc gggcggggtg     300

gcgcccgctg ccggctacgt gcctcgcatt gctttctacg cgggcctgcg gcggccccac     360
```

```
gagggttacg aggtgctgcg cttcgacgac gtggtgacca acgtgggcaa cgcctacgag      420

gcagccagcg gcaagtttac ttgccccatg ccaggcgtct acttcttcgc ttaccacgtg      480

ctcatgcgcg gcggcgacgg caccagcatg tgggccgacc tcatgaagaa cggacagggc      540

tggggggcta gaacggcctt gccctcagca gagtctgtgg cttggcagct caagggccag      600

ccaggagcct ctgcaatcat ctgcttattg cgcgtcaccg tcatccagtg ggagagcctt      660

gtggtaccac ctttctccac ctatggctgc ggcccgcagg aagatgacgg gttgcgcttc      720

tgctctggag ccagccctgt tgccgggaac tgcaacccgc aagatgatgc cagagctcag      780

cttccctctt ·tttatgttgc agagtttatg ctgccctgca ctgagcagac gctttcgctt      840

acgcagccct gcccttcacc ttgcccagtg attccggaat aa                        882
```

<210> 357

<211> 15

<212> PRT

<213> Homo sapiens

<400> 357

```
Met Val Leu Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser
1               5                   10                  15
```

<210> 358

<211> 278

<212> PRT

<213> Homo sapiens

<400> 358

```
Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val
1               5                   10                  15


Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala
            20                  25                  30


Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg
        35                  40                  45
```

213

```
Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
    50                  55              60

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro
65                  70              75                  80

Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala
            85                  90                  95

Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg
            100             105                 110

Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser
    115                 120                 125

Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His
    130             135                 140

Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met
145             150                 155                 160

Lys Asn Gly Gln Gly Trp Gly Pro Arg Thr Ala Leu Pro Ser Ala Glu
                165             170             175

Ser Val Ala Trp Gln Leu Lys Gly Gln Pro Gly Ala Ser Ala Ile Ile
            180             185             190

Cys Leu Leu Arg Val Thr Val Ile Gln Trp Glu Ser Leu Val Val Pro
    195             200             205

Pro Phe Ser Thr Tyr Gly Cys Gly Pro Gln Glu Asp Asp Gly Leu Arg
    210             215             220

Phe Cys Ser Gly Ala Ser Pro Val Ala Gly Asn Cys Asn Pro Gln Asp
225             230             235             240

Asp Ala Arg Ala Gln Leu Pro Ser Phe Tyr Val Ala Glu Phe Met Leu
            245             250             255

Pro Cys Thr Glu Gln Thr Leu Ser Leu Thr Gln Pro Cys Pro Ser Pro
            260             265             270
```

Cys Pro Val Ile Pro Glu
        275

<210> 359

<211> 36

<212> PRT

<213> Homo sapiens

<400> 359

Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu
1   5   10   15

Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe
            20   25   30

Ala Tyr His Val
        35

<210> 360

<211> 20

<212> PRT

<213> Homo sapiens

<400> 360

Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val Leu
1   5   10   15

Met Arg Gly Gly
            20

<210> 361

<211> 27

<212> PRT

<213> Homo sapiens

<400> 361

Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly Gly
            20   25

<210> 362

<211> 27

<212> PRT

<213> Homo sapiens

<400> 362

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly
            20   25

<210> 363

<211> 27

<212> PRT

<213> Homo sapiens

<400> 363

Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
1   5   10   15

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
            20   25

<210> 364

<211> 27

<212> PRT

216

217

<211> 29

<212> PRT

<213> Homo sapiens

<400> 367

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly
            20   25

<210> 368

<211> 29

<212> PRT

<213> Homo sapiens

<400> 368

Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly
1   5   10   15

Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu
            20   25

<210> 369

<211> 27

<212> PRT

<213> Homo sapiens

<400> 369

Pro His Glu Gly Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn
1   5   10   15

Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly Lys
            20   25

<210> 370

<211> 14

<212> PRT

<213> Homo sapiens

<400> 370

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu
1   5   10

<210> 371

<211> 27

<212> PRT

<213> Homo sapiens

<400> 371

Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro
1   5   10   15

Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro
            20   25

<210> 372

<211> 27

<212> PRT

<213> Homo sapiens

<400> 372

Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly
1   5   10   15

Pro Pro Gly Pro Gly Pro Gly Gly Val Ala Pro
            20   25

219

```
<210>  373

<211>  24

<212>  PRT

<213>  Homo sapiens


<400>  373

Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro
1               5                   10                  15

Gly Gly Val Ala Pro Ala Ala Gly
            20


<210>  374

<211>  44

<212>  PRT

<213>  Homo sapiens


<400>  374

Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro
1               5                   10                  15

Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro
            20                  25                  30

Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
        35                  40


<210>  375

<211>  27

<212>  PRT

<213>  Homo sapiens


<400>  375

Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly
```

```
        1              5                   10                  15


        Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro
                    20                  25



<210>   376

<211>   29

<212>   PRT

<213>   Homo sapiens



<400>   376

Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly
1               5                   10                  15


Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro
                20                  25



<210>   377

<211>   2016

<212>   DNA

<213>   Homo sapiens



<220>

<221>   CDS

<222>   (683)..(1399)

<223>



<400>   377
aggaaggtta gggaggcgga gagggaccgc gcccgcagag agaggcgcgg gccagggcta       60

ctagcaggga ctggggccgc ggcaggggta gcaaggtgag tcggtgcttg ccaagaggca      120

gagcgcaaaa cctactagga gatcgcgccc ggtgagcagc acccgcagct cagagcccgg      180

gacgtccgga gcgcggggag cagtcccctc tccatcaggg agtggtctat ctgggcagtc      240

tgggacccag gcaccgcgcc atccctgaga gagcagcagt ctggagagca ggcatctcag      300
```

221

```
atccctaaga aaccagccgt ccgagaagcc gcggatctca ggtgcccagg atcgttagga    360

ctgaacggga gggtactaga ggaccactgg ctctggaccg tcgggagctg cccctgacgt    420

aacccacgag gggcctcccc ttgacggacg gcttggggag cggcaccgcc ggcctggagc    480

ccgcagaggc agggtaaggg gagcgggggg cagccgtcgg gggagtgcag acccaggccc    540

aaggcgggtc accgctcctg gcccgcggag agccccggcc ccggcagcca ttgcgcccaa    600

gagtgaggaa gatttgctgg ccctggcagc gtcgcggctg agccggcgca agagggtggc    660

gggcgcggcc gtcggagtgg cc atg gtg ctg ctg ctg ctg gtg gcc atc ccg    712
                          Met Val Leu Leu Leu Leu Val Ala Ile Pro
                          1                5                    10

ctg ctg gtg cac agc tcc cgc ggg cca gcg cac tac gag atg ctg ggt    760
Leu Leu Val His Ser Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly
              15                  20                  25

cgc tgc cgc atg gtg tgc gac ccg cat ggg ccc cgt ggc cct ggt ccc    808
Arg Cys Arg Met Val Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro
              30                  35                  40

gac ggc gcg cct gct tcc gtg ccc ccc ttc ccg cca ggc gcc aag gga    856
Asp Gly Ala Pro Ala Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly
              45                  50                  55

gag gtg ggc cgg cgc ggg aaa gca ggc ctg cgg ggg ccc cct gga cca    904
Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro
    60                  65                  70

cca ggt cca aga ggg ccc cca gga gaa ccc ggc agg cca ggc ccc ccg    952
Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
75                  80                  85                  90

ggc cct ccc ggt cca ggt ccg ggc ggg gtg gcg ccc gct gcc ggc tac   1000
Gly Pro Pro Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr
                  95                 100                 105

gtg cct cgc att gct ttc tac gcg ggc ctg cgg cgg ccc cac gag ggt   1048
Val Pro Arg Ile Ala Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly
                 110                 115                 120

tac gag gtg ctg cgc ttc gac gac gtg gtg acc aac gtg ggc aac gcc   1096
Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala
             125                 130                 135

tac gag gca gcc agc ggc aag ttt act tgc ccc atg cca ggc gtc tac   1144
Tyr Glu Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr
        140                 145                 150

ttc ttc gct tac cac gtg ctc atg cgc ggc ggc gac ggc acc agc atg   1192
Phe Phe Ala Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met
155                 160                 165                 170
```

```
tgg gcc gac ctc atg aag aac gga cag gtc cgg gcc agc gcc att gct      1240
Trp Ala Asp Leu Met Lys Asn Gly Gln Val Arg Ala Ser Ala Ile Ala
                175                 180                 185

cag gac gcg gac cag aac tac gac tac gcc agc aac agc gtc att ctg      1288
Gln Asp Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu
                190                 195                 200

cac ctg gac gtg ggc gac gag gtc ttc atc aag ctg gac ggc ggg aaa      1336
His Leu Asp Val Gly Asp Glu Val Phe Ile Lys Leu Asp Gly Gly Lys
            205                 210                 215

gtg cac ggc ggc aac acc aac aag tac agc acc ttc tcc ggc ttc atc      1384
Val His Gly Gly Asn Thr Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile
    220                 225                 230

atc tac ccc gac tga gccggccccg ccccgtgccc cgctcgccc cttctctccc       1439
Ile Tyr Pro Asp
235
```

```
gtcctcaccc acctcctgcc cgccccaccc gaggcgccac cccacccttt gagagcctgg      1499

cggtggggtg gacccttccg ttcccggagg cggcctaaat gggcgaactc ttggtgctca      1559

agggtataag tggccgggaa gaggaggaga cccggccaga ggagcagagc gacttccgga      1619

gggatcaccc gcacccaagt gcgcgctgga ccccataggg gcagaggtcg tggctttctc      1679

ttttgtacag agatggggag cagtttttaat agcgggactc agaggcccag aaagccggag      1739

ggaagccccc gcagcttgcg agggaaataa cagaaacagg aggagcccat ttaggcaaga      1799

gaagacatta aaacagggta gtgcaggttc tccgtcacaa ctttctctcg ccaccctctc      1859

gtcccctcgt ctccactttc aggctcaggc tccagccttg gcagccttcc tgtgaactgg      1919

aggaaccagt gaattctttc ctggcattta aaacgcattc tgtacagtcc ccattccccc      1979

ctatccggac taggccctgg ggctacagct gctgctg                              2016
```

<210> 378

<211> 238

<212> PRT

<213> Homo sapiens

<400> 378

```
Met Val Leu Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser Ser
1               5                   10                  15
```

Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val Cys
        20   25   30

Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala Ser
        35   40   45

Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly
    50   55   60

Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro
65   70   75   80

Pro Gly Glu Pro Gly Arg Pro Gly Pro Gly Pro Pro Gly Pro Gly
                85   90   95

Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala Phe
                100   105   110

Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg Phe
        115   120   125

Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly
        130   135   140

Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val
145   150   155   160

Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met Lys
                165   170   175

Asn Gly Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala Asp Gln Asn
                180   185   190

Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp
        195   200   205

Glu Val Phe Ile Lys Leu Asp Gly Gly Lys Val His Gly Gly Asn Thr
    210   215   220

Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro Asp
225   230   235

<210> 379

224

<211> 717

<212> DNA

<213> Homo sapiens

<400> 379
atggtgctgc tgctgctggt ggccatcccg ctgctggtgc acagctcccg cgggccagcg   60

cactacgaga tgctgggtcg ctgccgcatg gtgtgcgacc cgcatgggcc ccgtggccct   120

ggtcccgacg gcgcgcctgc ttccgtgccc cccttcccgc caggcgccaa gggagaggtg   180

ggccggcgcg ggaaagcagg cctgcggggg cccccctggac caccaggtcc aagagggccc   240

ccaggagaac ccggcaggcc aggcccccccg ggccctcccg gtccaggtcc gggcggggtg   300

gcgcccgctg ccggctacgt gcctcgcatt gctttctacg cgggcctgcg cggccccac   360

gagggttacg aggtgctgcg cttcgacgac gtggtgacca acgtgggcaa cgcctacgag   420

gcagccagcg gcaagtttac ttgccccatg ccaggcgtct acttcttcgc ttaccacgtg   480

ctcatgcgcg gcggcgacgg caccagcatg tgggccgacc tcatgaagaa cggacaggtc   540

cgggccagcg ccattgctca ggacgcggac cagaactacg actacgccag caacagcgtc   600

attctgcacc tggacgtggg cgacgaggtc ttcatcaagc tggacggcgg gaaagtgcac   660

ggcggcaaca ccaacaagta cagcaccttc tccggcttca tcatctaccc cgactga   717

<210> 380

<211> 223

<212> PRT

<213> Homo sapiens

<400> 380

Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val
1   5   10   15

Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala
                20   25   30

Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg
            35   40   45

```
Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
    50                  55              60

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Gly Pro Pro Gly Pro
65                  70              75                  80

Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala
                85              90                  95

Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg
                100             105             110

Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser
            115             120             125

Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His
    130             135             140

Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met
145             150             155             160

Lys Asn Gly Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala Asp Gln
                165             170             175

Asn Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly
            180             185             190

Asp Glu Val Phe Ile Lys Leu Asp Gly Gly Lys Val His Gly Gly Asn
    195             200             205

Thr Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro Asp
    210             215             220
```

<210> 381

<211> 36

<212> PRT

<213> Homo sapiens

/

<400> 381

226

Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu
1   5   10   15

Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe
            20   25   30

Ala Tyr His Val
        35

<210> 382

<211> 20

<212> PRT

<213> Homo sapiens

<400> 382

Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val Leu
1   5   10   15

Met Arg Gly Gly
            20

<210> 383

<211> 27

<212> PRT

<213> Homo sapiens

<400> 383

Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
1   5   10   15

Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly Gly
            20   25

<210> 384

<211> 27

227

<212> PRT

<213> Homo sapiens

<400> 384

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly
            20   25

<210> 385

<211> 22

<212> PRT

<213> Homo sapiens

<400> 385

Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp Glu
1   5   10   15

Val Phe Ile Lys Leu Asp
            20

<210> 386

<211> 20

<212> PRT

<213> Homo sapiens

<400> 386

Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp Glu
1   5   10   15

Val Phe Ile Lys
            20

<210> 387

228

<211> 27

<212> PRT

<213> Homo sapiens

<400> 387

Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
1   5   10   15

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
            20   25

<210> 388

<211> 27

<212> PRT

<213> Homo sapiens

<400> 388

Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly
1   5   10   15

Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
            20   25

<210> 389

<211> 29

<212> PRT

<213> Homo sapiens

<400> 389

Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
1   5   10 | 15

                                                          /

Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly Gly Val Ala
            20   25

229

<210> 390

<211> 27

<212> PRT

<213> Homo sapiens

<400> 390

Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly
1   5   10   15

Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro
            20   25

<210> 391

<211> 29

<212> PRT

<213> Homo sapiens

<400> 391

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
1   5   10   15

Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly
            20   25

<210> 392

<211> 29

<212> PRT

<213> Homo sapiens

<400> 392

Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly
1   5   10   15

230

Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu
            20   25

<210>   393

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   393

Pro His Glu Gly Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn
1   5   10   15

Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly Lys
            20   25

<210>   394

<211>   14

<212>   PRT

<213>   Homo sapiens

<400>   394

Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu
1   5   10

<210>   395

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   395

Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro
1   5   10   15

Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro
              20   25

<210>   396

<211>   27

<212>   PRT

<213>   Homo sapiens

<400>   396

Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly
1   5   10   15

Pro Pro Gly Pro Gly Pro Gly Gly Val Ala Pro
              20   25

<210>   397

<211>   24

<212>   PRT

<213>   Homo sapiens

<400>   397

Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly Pro
1   5   10   15

Gly Gly Val Ala Pro Ala Ala Gly
              20

<210>   398

<211>   44

<212>   PRT

<213>   Homo sapiens

<400>   398

Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro

Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro
              20   25   30

Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
          35   40

<210> 399

<211> 27

<212> PRT

<213> Homo sapiens

<400> 399

Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly
1   5   10   15

Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro
              20   25

<210> 400

<211> 10

<212> PRT

<213> Homo sapiens

<400> 400

Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro
1   5   10

<210> 401

<211> 29

<212> PRT

<213> Homo sapiens

<400> 401

Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly
1   5   10   15

Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro
            20   25

<210> 402

<211> 243

<212> PRT

<213> Macaca mulatta

<400> 402

Met Leu Leu Gly Ala Val Leu Leu Leu Ala Leu Pro Ser His Gly
1   5   10   15

Gln Asp Thr Thr Thr Gln Gly Pro Gly Val Leu Leu Pro Leu Pro Lys
            20   25   30

Gly Ala Cys Thr Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly His
            35   40   45

Asn Gly Val Pro Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu Lys
        50   55   60

Gly Glu Lys Gly Asp Pro Gly Leu Ile Gly Pro Lys Gly Asp Thr Gly
65   70   75   80

Glu Thr Gly Val Thr Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly Ile
                85   90   95

Gln Gly Arg Lys Gly Glu Pro Gly Glu Gly Ala Tyr Val Tyr Arg Ser
            100   105   110

Ala Phe Ser Val Gly Leu Glu Thr Tyr Val Thr Val Pro Asn Met Pro
        115   120   125

Ile Arg Phe Thr Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp Gly
    130   135   140

234

Ser Thr Gly Lys Phe His Cys Asn Ile Pro Gly Leu Tyr Tyr Phe Ala
145   150   155   160

Tyr His Ile Thr Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe Lys
                165   170   175

Lys Asp Lys Ala Met Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Asn Asn
            180   185   190

Val Asp Gln Ala Ser Gly Ser Val Leu Leu His Leu Glu Val Gly Asp
            195   200   205

Gln Val Trp Leu Gln Val Tyr Gly Glu Gly Glu Arg Asn Gly Leu Tyr
        210   215   220

Ala Asp Asn Asp Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr His
225   230   235   240

Asp Thr Asn

<210> 403

<211> 240

<212> PRT

<213> Bos taurus

<400> 403

Met Leu Leu Gln Gly Ala Leu Leu Leu Leu Ala Leu Pro Ser His
1   5   10   15

Gly Glu Asp Asn Met Glu Asp Pro Pro Leu Pro Lys Gly Ala Cys Ala
            20   25   30

Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly His Asn Gly Thr Pro
        35   40   45

Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu Lys Gly Glu Lys Gly
    50   55   60

235

Asp Ala Gly Leu Leu Gly Pro Lys Gly Glu Thr Gly Asp Val Gly Met
65   70   75   80

Thr Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly Thr Pro Gly Arg Lys
                     85   90   95

Gly Glu Pro Gly Glu Ala Ala Tyr Val Tyr Arg Ser Ala Phe Ser Val
               100   105   110

Gly Leu Glu Thr Arg Val Thr Val Pro Asn Val Pro Ile Arg Phe Thr
          115   120   125

Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp Gly Ser Thr Gly Lys
     130   135   140

Phe Tyr Cys Asn Ile Pro Gly Leu Tyr Tyr Phe Ser Tyr His Ile Thr
145   150   155   160

Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe Lys Lys Asp Lys Ala
               165   170   175

Val Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Lys Asn Val Asp Gln Ala
          180   185   190

Ser Gly Ser Val Leu Leu His Leu Glu Val Gly Asp Gln Val Trp Leu
          195   200   205

Gln Val Tyr Glu Gly Glu Asn His Asn Gly Val Tyr Ala Asp Asn Val
     210   215   220

Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr His Asn Ile Val Glu
225   230   235   240

<210> 404

<211> 244

<212> PRT

<213> Homo sapiens

<400> 404

Met Leu Leu Leu Gly Ala Val Leu Leu Leu Leu Ala Leu Pro Gly His

236

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        1                   5                       10                      15

      Asp Gln Glu Thr Thr Ile Gln Gly Pro Gly Val Leu Leu Pro Leu Pro
                    20                  25                  30

      Lys Gly Ala Cys Thr Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly
                    35                  40                  45

      His Asn Gly Ala Pro Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu
                    50                  55                  60

      Lys Gly Glu Lys Gly Asp Pro Gly Leu Ile Gly Pro Lys Gly Asp Ile
      65                  70                  75                  80

      Gly Glu Thr Gly Val Pro Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly
                    85                  90                  95

      Ile Gln Gly Arg Lys Gly Glu Pro Gly Glu Gly Ala Tyr Val Tyr Arg
                    100                 105                 110

      Ser Ala Phe Ser Val Gly Leu Glu Thr Tyr Tyr Thr Ile Pro Asn Met
                    115                 120                 125

      Pro Glu Arg Phe Thr Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp
                    130                 135                 140

      Gly Ser Thr Gly Lys Phe His Cys Asn Ile Pro Gly Leu Tyr Tyr Phe
      145                 150                 155                 160

      Ala Tyr His Ile Thr Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe
                    165                 170                 175

      Lys Lys Asp Lys Ala Met Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Asn
                    180                 185                 190

      Asn Tyr Asp Gln Ala Ser Gly Ser Val Leu Leu His Leu Glu Val Gly
                    195                 200                 205

      Asp Gln Val Trp Leu Gln Val Tyr Gly Glu Gly Glu Arg Asn Gly Leu
                    210                 215                 220

      Tyr Ala Asp Asn Asp Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr
      225                 230                 235                 240
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His Asp Thr Asn